

ATTACHMENT NOT INCLUDED

**EMERGENCY RESPONSE REPORT  
FOR  
LION OIL MAGNOLIA SPILL  
800 COLUMBIA ROAD 25  
MAGNOLIA, COLUMBIA COUNTY, ARKANSAS**

Prepared for

**U.S. Environmental Protection Agency**  
Linda Carter, Project Officer  
1445 Ross Avenue  
Dallas, Texas 75202

Contract No. EP-W-06-042  
Technical Direction Document No. 2/WESTON-042-13-005  
TDD No. TO-0002-42-13-05  
WESTON W.O. No. 20406.012.002.0799.01  
NRC No. 1040525  
FPN ID E13610  
CERCLIS ID N/A  
EPA OSC: Mark Hayes  
START-3 PTL: David McCarty

Submitted by

**Weston Solutions, Inc.**  
Robert Beck, VP, P.E., Program Manager  
70 NE Loop 410, Suite 600  
San Antonio, Texas 78216  
(210) 308-4300

June 2013

## **EMERGENCY RESPONSE REPORT**

### **1. INTRODUCTION**

On 9 March 2013, Lion Oil Trading and Transportation, Inc. (LOTT) notified the National Response Center (NRC No. 1040525) of an estimated 1,500-barrel oil spill near Magnolia, Columbia County, Arkansas. The National Response Center notified the U.S. Environmental Protection Agency (EPA) Region 6 Prevention and Response Branch (PRB). At approximately 1130 hours on 9 March 2013, the EPA-PRB activated Weston Solutions, Inc. (WESTON®), the EPA Region 6 Superfund Technical Assessment and Response Team (START-3) contractor. Under direction from EPA On-scene Coordinator (OSC) Mark Hayes and referenced in Technical Direction Document (TDD) No. 2/WESTON-042-13-005 (Attachment K), START-3 was contacted to initiate a Tier 1 response with the primary tasks of documenting response activities performed during response and remediation operations by the potentially responsible party (PRP) and PRP-contracted organizations.

LOTT, the PRP, reported the oil spill occurred at their Magnolia Station. The station is a bulk storage facility that consists of five aboveground storage tanks with a total capacity of 200,000 barrels. The spill occurred at the facility when a suction pump that transfers crude oil from the tank battery to an underground 12-inch transmission line failed due to possible internal corrosion. The system is monitored with a supervisory control and data acquisition (SCADA) system. The initial report estimated approximately 1,500 barrels of crude oil flowed downgradient into an unnamed creek and Little Cornie Bayou. After further calculations were conducted, LOTT adjusted the total spill volume to 5,600 barrels, which included the oil spill in the containment pond, the intermittent creek, and Little Cornie Bayou. The crude oil overfilled the pond and flowed downgradient into an unnamed intermittent creek and Little Cornie Bayou, impacting approximately 3.5 miles of the creek and bayou. The aboveground storage tanks were surrounded by a secondary containment system, but secondary containment had not been constructed around the pump station where the spill occurred.

LOTT is owned by Delek Refining, Inc. (Delek), and the 12-inch transmission line is owned by El Dorado Pipeline, LLC, a subsidiary of Delek. The Facility Response Plan (FRP) applicable facility

and 12-inch pipeline are used to supply crude oil to a Delek-owned refinery in El Dorado, Arkansas, which is approximately 30 miles east of the facility.

The geographic coordinates of the oil spill, Latitude: 33.240556° North and Longitude: 93.146944° West, were determined using a handheld Global Positioning System (GPS) based on the World Geodetic System – 1984 (WGS-84) with accuracy estimated at less than 50-feet circular probable error. A Site Location Map, Site Area Map, and Site Layout Map are included as Attachments A, B, and C, respectively.

## **2. SUMMARY OF ACTIONS**

On 09 March 2013, the EPA team mobilized to the incident site to conduct a site investigation and met with PRP representatives and cleanup contractor TAS Environmental and representatives for Arkansas Department of Environmental Quality (ADEQ). CTEH was also on-site to conduct mobile air monitoring outside of the work zone area for LOTT. EPA participated in meetings with the PRP, their cleanup contractor, and ADEQ to develop a work plan for the cleanup operations.

### **Air Monitoring Operations**

PRP contractor TAS Environmental conducted daily air monitoring for lower explosive limit (LEL), benzene, hydrogen sulfide (H<sub>2</sub>S), and volatile organic compounds (VOCs) along the spill pathway. TAS reported no detections for LEL and H<sub>2</sub>S. VOCs and benzene were detected periodically in the work zone. Refer to Attachment I for the air monitoring reports and locations.

LOTT also contracted CTEH to conduct mobile air monitoring outside of the work zone area for H<sub>2</sub>S and VOCs during remediation activities. Refer to Attachment I for the air monitoring reports and locations.

While on-site, EPA also conducted periodic mobile air monitoring for H<sub>2</sub>S, carbon monoxide (CO), LEL, oxygen (O<sub>2</sub>), and VOCs utilizing a RAE Systems MultiRAE. All EPA air monitoring readings did not exceed background levels, and are recorded in the logbooks (Attachment G). See Attachment D for the route that was driven while conducting mobile air monitoring.

## Cleanup Operations

On 09 March 2013, LOTT deployed approximately 20 personnel and 8 vacuum trucks to the incident location. Personnel constructed two weir dams along Little Cornie Bayou Creek and set up collection locations with vacuum trucks upstream of where the dams were constructed. Vacuum trucks were also staged at the containment pond to recover crude oil in the pond. Cleanup personnel deployed boom between each of the weir dam locations. LOTT established 24-hour operations and recovered crude oil throughout the night. Two frac tanks were deployed on-site and were utilized as temporary storage for crude oil and water recovered from the creek and pond. A 25,000-barrel tank located on the facility property was also used to store the recovered oil and water. Refer to Attachment C for the Site Layout Map.

On 10 through 15 March 2013, the number of personnel including LOTT personnel and contractors increased to approximately 100, and the number of vacuum trucks increased to 11. LOTT continued to conduct 24-hour operations, utilizing vacuum trucks to remove crude oil from Little Cornie Bayou Creek and the containment pond. Heavy rainfall on 09 and 10 March 2013 made access to the site difficult, and personnel had to work to improve the road conditions. Freezing temperatures also hampered the cleanup activities due to reduced oil flow in the creek. Personnel placed absorbent boom and pads at the two weir dam locations and downstream from the second dam location and began to collect crude oil at additional collection locations. Personnel also began to remove oil contaminated debris from the creek and used fresh water to conduct high volume, low flow flushing of the creek immediately downgradient of the containment pond and upstream from weir dam 1. During this period, an area along the intermittent creek that was dammed up by beavers was identified approximately 500 feet downgradient of the containment pond. The recovered crude oil and water was pumped into the frac tanks for separation and was transferred to the 25,000-barrel tank, which is part of the facility where the quantity of crude oil recovered will be gauged. During this period, LOTT established three zones and additional collection points within the intermittent creek and Little Cornie Bayou to assist in establishing cleanup goals and completion points (Attachment C).

On 16 through 23 March 2013, LOTT increased personnel to 110 to recover crude oil, remove oil contaminated debris, and flush the intermittent creek and Little Cornie Bayou. The 24-hour

operational period ended on 17 March 2013. Personnel reinforced weir dams 1 and 2 with sand bags and soil and began to excavate contaminated soil along the spill pathway. The excavated soil was staged on-site for future disposal. Zone 4 was established downstream of weir dam 2 to County Road 34, and sorbent boom was placed every 150-feet throughout that section of the bayou. The profile for waste generated on-site was completed and approved by ADEQ.

On 22 March 2013, LOTT conducted a field test of an absorbent material called Cell-U-Sorb under the oversight of EPA and ADEQ. Cell-U-Sorb was applied to a small amount of free oil in the creek immediately upstream of weir dam 2. LOTT conducted the field test to determine its effectiveness for potential use.

On 23 March 2013 a significant rainfall event caused a breach in weir dam 1; however, there was no impact to weir dam 2. On 24 through 27 March 2013, remediation efforts shifted from conducting free oil recovery utilizing vacuum trucks, to predominately conducting contaminated debris removal and freshwater flushing of the Little Cornie Bayou. On 25 March 2013, the remaining portion weir dam 1 was removed by LOTT personnel.

On 27 March 2013, the EPA team demobilized from the site, transferring primary oversight of remediation activities to ADEQ.

On 10 April 2013, the EPA team contacted LOTT representative George Garten for a site follow-up. Mr. Garten stated that on 4 April 2013, the active cleanup of the creek was completed and a boom maintenance plan was created and approved by ADEQ. The plan was to be implemented on 10 April 2013 by the boom maintenance contractor, Code 3 Services. Mr. Garten stated after further calculations, LOTT estimated 5,600 barrels of crude oil spilled as a result of the suction pump failure and approximately 2,114 barrels was recovered from the intermittent creek and Little Cornie Bayou, and 3,245 barrels was collected from the containment pond at the station for a total of 5,359 barrels of crude oil recovered. An unknown additional amount of crude oil was recovered in the contaminated debris, from soil removed from the site, and from spent absorbent boom and absorbent pads. Mr. Garten stated that the recovered crude oil would be transported to and refined at the Delek-owned refinery in El Dorado, Arkansas. Ten roll-off boxes containing crude oil-contaminated debris, personal protective equipment (PPE), boom, and absorbent pads were to be transported to WCA Union County Landfill in El Dorado, Arkansas for disposal. The excavated

soil was to be transported to Republic Webster Parish Landfill in Minden, Louisiana, for disposal. Mr. Garten also stated ADEQ personnel had visited the site since the departure of the EPA team and would continue to follow-up with site activities.

On 14 May 2013, EPA conducted a phone follow-up with ADEQ Chris Voss. Mr. Voss stated that ADEQ conducted a site follow-up on 25 April 2013. At the time of the visit, ADEQ confirmed LOTT had implemented their boom maintenance plan and had shipped the waste contained in the roll-off boxes to the respective landfills. Mr. Voss also stated that ADEQ would continue to provide oversight of the remaining cleanup activities and would keep EPA informed of any future changes. Copies of the ADEQ reports are provided in Attachment J.

At the time of this report, LOTT has not provided EPA final disposal quantities of the materials that have been shipped off-site for disposal. This final Emergency Response Report was prepared as part of the requirements of TDD No. 2/WESTON-042-13-005 and serves as documentation of work completed.

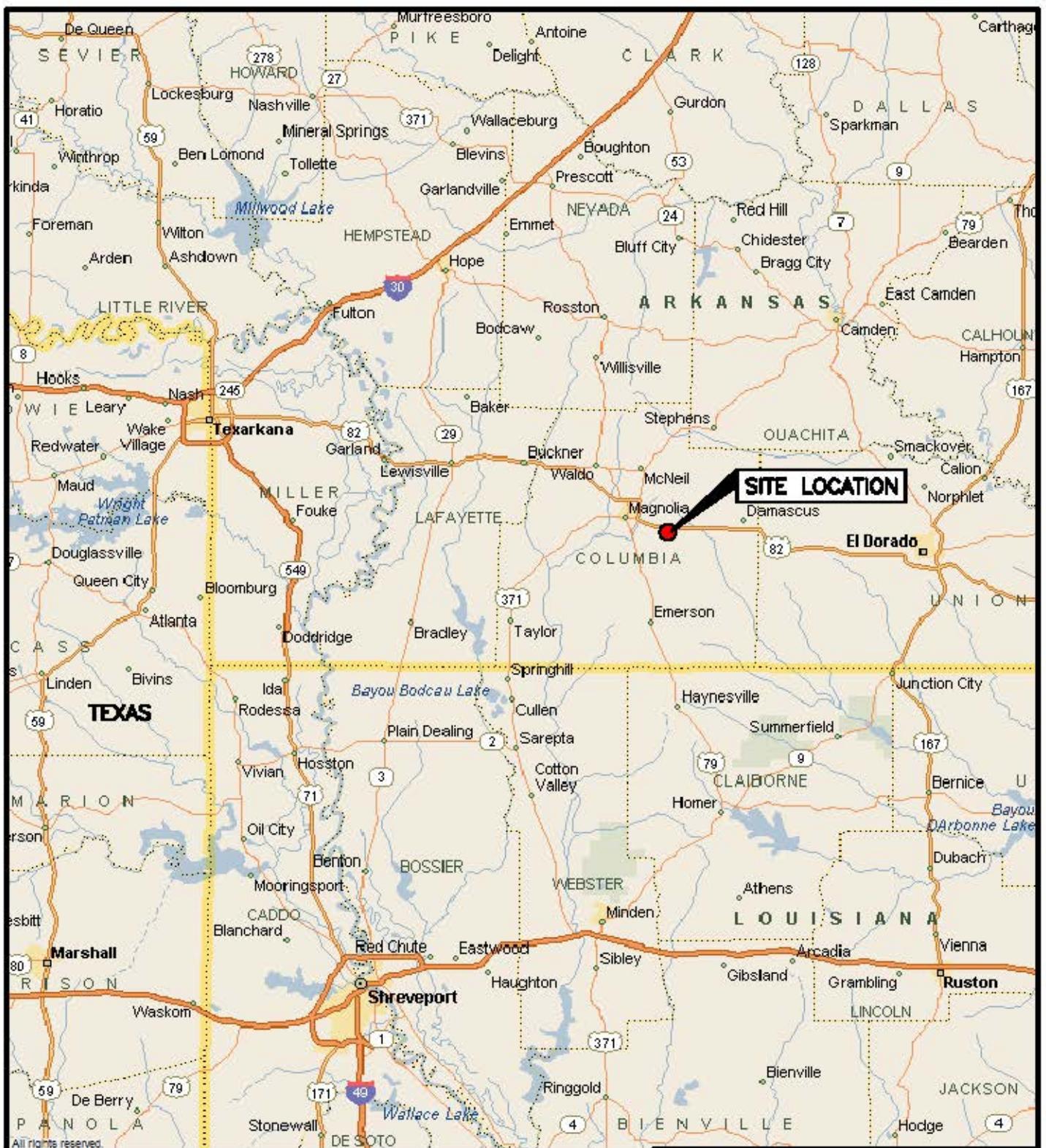
### **3. LIST OF ATTACHMENTS**

- A. Site Location Map
- B. Site Area Map
- C. Site Layout Map
- D. Mobile Air Monitoring Map
- E. Digital Photographs
- F. NRC Report No. 1040525
- G. Site Logbooks
- H. Pollution Reports
- I. LOTT Documentation and Air Monitoring Reports
- J. ADEQ Spill Reports
- K. TDD No. 2/WESTON-042-13-005 and Amendment 1

- The EPA Task Monitor did not provide final approval of this report prior to the completion date of the work assignment. Therefore, Weston Solutions, Inc. has submitted this report absent the Task Monitor's approval.
  
- The EPA Task Monitor has provided final approval of this report. Therefore, Weston Solutions, Inc. has submitted this report with the Task Monitor's approval.

**ATTACHMENT A**

**Site Location Map**



SOURCE: MICROSOFT STREETS 2009.  
FPM No.: E13610  
NRC No.: 1040525  
TDD No.: 2/WESTON-042-13-005



**US EPA REGION 6**

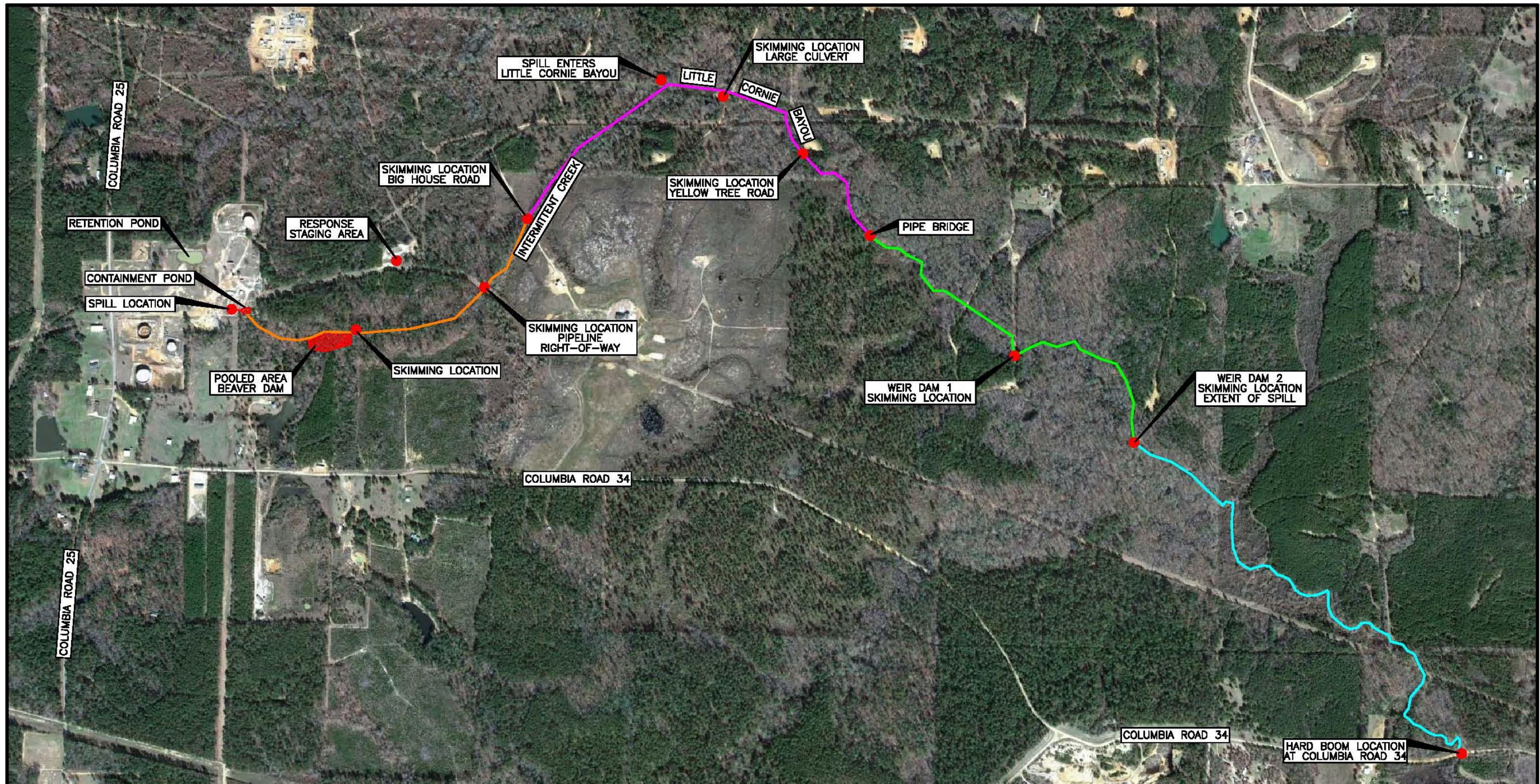
**ATTACHMENT A**  
**SITE LOCATION MAP**  
**LION OIL MAGNOLIA SPILL**  
**800 COLUMBIA ROAD 25**

MAGNOLIA, COLUMBIA COUNTY, ARKANSAS

|                   |                                 |                        |
|-------------------|---------------------------------|------------------------|
| DATE:<br>JUN 2013 | W.O. #<br>20406.012.002.0799.01 | SCALE:<br>NOT TO SCALE |
|-------------------|---------------------------------|------------------------|

**ATTACHMENT C**

**Site Layout Map**



**LEGEND:**

- SITE LOCATIONS
- OIL POOLED AREA
- ZONE 1
- ZONE 2
- ZONE 3
- ZONE 4

SOURCE: GOOGLE EARTH PRO AERIAL 2012.  
FPN No.: E13610  
NRC No.: 1040525  
TDD No.: 2/WESTON-042-13-005



0 375 750  
SCALE IN FEET

N

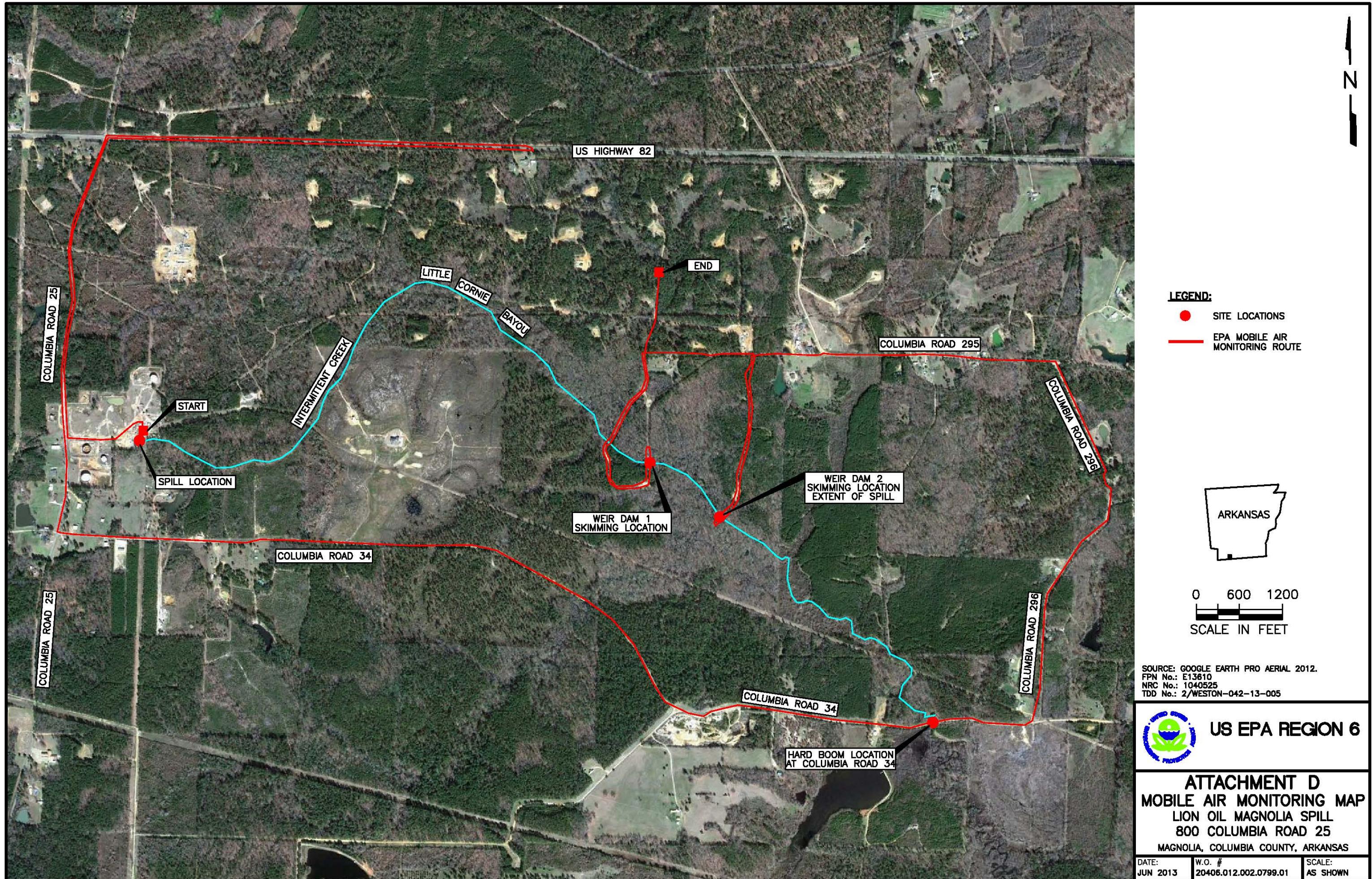


**US EPA REGION 6**  
**ATTACHMENT C**  
**SITE LAYOUT MAP**  
**LION OIL MAGNOLIA SPILL**  
**800 COLUMBIA ROAD 25**  
**MAGNOLIA, COLUMBIA COUNTY, ARKANSAS**

|                |                               |                 |
|----------------|-------------------------------|-----------------|
| DATE: JUN 2013 | W.O. #: 20406.012.002.0799.01 | SCALE: AS SHOWN |
|----------------|-------------------------------|-----------------|

**ATTACHMENT D**

**Mobile Air Monitoring Map**



**ATTACHMENT F**

**NRC Report No. 1040525**

NATIONAL RESPONSE CENTER 1-800-424-8802

\*\*\* For Public Use \*\*\*

Information released to a third party shall comply with any applicable federal and/or state Freedom of Information and Privacy Laws

Incident Report # 1040525

#### INCIDENT DESCRIPTION

\*Report taken at 12:01 on 09-MAR-13

Incident Type: FIXED

Incident Cause: EQUIPMENT FAILURE

Affected Area: LITT

The incident occurred on 09-MAR-13 at 09:00 local time.

Affected Medium: WATER LITTLE CORNIE WATERWAY

#### SUSPECTED RESPONSIBLE PARTY

Organization: LION OIL TRADING & TRANSPORTATION  
EL DORADO, AR

Type of Organization: PRIVATE ENTERPRISE

#### INCIDENT LOCATION

SEE LAT/LONG County: COLUMBIA

City: MAGNOLIA State: AR

Latitude: 33 14' 26" N

Longitude: 093 08' 49" W

#### RELEASED MATERIAL(S)

CHRIS Code: OIL Official Material Name: OIL: CRUDE

Also Known As:

Qty Released: 1500 BARREL(S) Qty in Water: 0 UNKNOWN AMOUNT

#### DESCRIPTION OF INCIDENT

CALLER REPORTED A LEAK FROM THE SUCTION SIDE OF A LINE BETWEEN A TANK AND A PUMP.

#### INCIDENT DETAILS

Package: N/A

Building ID:

Type of Fixed Object: TANK FARM

Power Generating Facility: UNKNOWN

Generating Capacity:

Type of Fuel:

NPDES:

NPDES Compliance: UNKNOWN

---SHEEN INFORMATION---

Sheen Color: DARK BLACK

Sheen Odor Description:

Sheen Travel Direction:

Sheen Size Length: 1.5 MILES

Sheen Size Width: 3 FEET

#### ---WATER INFORMATION---

Body of Water: LITTLE CORNIE WATERWAY

Tributary of: CORNIE BAYOU

Nearest River Mile Marker:

Water Supply Contaminated: UNKNOWN

#### DAMAGES

Fire Involved: NO Fire Extinguished: UNKNOWN

INJURIES: NO Hospitalized: Empl/Crew: Passenger:

FATALITIES: NO Empl/Crew: Passenger: Occupant:

EVACUATIONS: NO Who Evacuated: Radius/Area:

Damages: NO

| <u>Closure Type</u> | <u>Description of Closure</u> | <u>Length of Closure</u> | <u>Direction of Closure</u> |
|---------------------|-------------------------------|--------------------------|-----------------------------|
| Air:                | N                             |                          |                             |
| Road:               | N                             |                          | Major Artery: N             |
| Waterway:           | N                             |                          |                             |
| Track:              | N                             |                          |                             |

Passengers Transferred: NO  
 Environmental Impact: UNKNOWN  
 Media Interest: NONE Community Impact due to Material:

---

#### REMEDIAL ACTIONS

VAC TRUCK USED, CLEAN UP UNDERWAY, MATERIAL CONTAINED  
 Release Secured: YES  
 Release Rate:  
 Estimated Release Duration:

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#### WEATHER

Weather: PARTLY CLOUDY, 69°F Wind speed: 5 MPH

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#### ADDITIONAL AGENCIES NOTIFIED

Federal:  
 State/Local: AROEM  
 State/Local On Scene:  
 State Agency Number:

---

#### NOTIFICATIONS BY NRC

AR DEPT OF ENVIRONMENTAL QUALITY (COMMAND CENTER)  
 09-MAR-13 12:10  
 ARKANSAS DEPT OF HEALTH & HUMAN SVC (MAIN OFFICE - DIVISION OF HEALTH)  
 09-MAR-13 12:10  
 ARKANSAS POISON CENTER (MAIN OFFICE)  
 09-MAR-13 12:10  
 AR STATE EMERGENCY SERVICES (MAIN OFFICE)  
 09-MAR-13 12:10  
 CALCASIEU PARISH SHERIFF'S DEPT (CRIMINAL INTELLIGENCE UNIT)  
 09-MAR-13 12:10  
 DHS NOC (NOC)  
 09-MAR-13 12:10  
 CGIS RAO ST. LOUIS (COMMAND CENTER)  
 09-MAR-13 12:10  
 DHS PROTECTIVE SECURITY ADVISOR (PSA DESK)  
 09-MAR-13 12:10  
 DOT CRISIS MANAGEMENT CENTER (MAIN OFFICE)  
 09-MAR-13 12:10  
 U.S. EPA VI (MAIN OFFICE)  
 09-MAR-13 12:13  
 GULF STRIKE TEAM (MAIN OFFICE)  
 09-MAR-13 12:10  
 LA DEPT OF ENV QUAL (MAIN OFFICE)  
 09-MAR-13 12:10  
 LA GOV OFFICE HS AND EMERGENCY PREP (MAIN OFFICE)  
 09-MAR-13 12:10  
 MEMPHIS POLICE DEPT (COMMAND CENTER)  
 09-MAR-13 12:10  
 NATIONAL INFRASTRUCTURE COORD CTR (MAIN OFFICE)  
 09-MAR-13 12:10  
 NOAA RPTS FOR AR (MAIN OFFICE)  
 09-MAR-13 12:10  
 NATIONAL RESPONSE CENTER HQ (AUTOMATIC REPORTS)  
 09-MAR-13 12:10  
 NRC SENIOR WATCH OFFICER (MAIN OFFICE)

09-MAR-13 12:15  
OTHER UNIT (MAIN OFFICE)  
09-MAR-13 12:34  
SHELBY SHERIFF'S OFFICE (CRIMINAL INTELLIGENCE UNIT)  
09-MAR-13 12:10  
LA STATE POLICE (MAIN OFFICE)  
09-MAR-13 12:10  
USCG DISTRICT 8 (MAIN OFFICE)  
09-MAR-13 12:10

---

ADDITIONAL INFORMATION

---

\*\*\* END INCIDENT REPORT # 1040525 \*\*\*

**ATTACHMENT G**

**Site Logbooks**

*"Outdoor writing products...  
...for outdoor writing people."*

Berry Poundexter 870-914-3783 (land owner)  
Debra Rhinehart 870-234-1872 (land owner)  
Brent Walker



RECYCLABLE

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6 32281 39112 8



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ALL-WEATHER  
**JOURNAL**  
No. 391

Lion Oil Magnolia Spill

FPN: E13610  
WRC No. 1040525

10406.012.002.0799.01

TDO No. ~~0002-42-13-05~~ <sup>dm</sup>  
~~2/Weston -092-13-005~~

Logbook 1 of 4



Name PTL David McCarty

Address 3900 Dallas Pkwy Ste 175  
Plano TX 75093

Phone (469) 666-5500

Project Lion Oil Magnolia Spill  
21Weston DF2-13-005  
TDD H0 0002-42-13-05

WON: 201406.012.0799.12

EPA OSC Mark Hayes  
START PTL David McCarty  
ATL Tori Gomory  
NRC: 1640525

Clear Vinyl Protective Slipcovers (Item No. 30) are available for this style of notebook.  
Helps protect your notebook from wear & tear. Contact your dealer or the J. L. Darling Corporation.

| PAGE | REFERENCE   | DATE |
|------|---|------|
|      | <p>SCRIBE: Tori Gomory (tg) <u>Tori Gomory</u><br/> Field Notes <u>David McCarty (dm)</u> <u>dm</u><br/> Field Map<br/> Logbook Reviewer <u>Hilary Gafford (HG)</u><br/> <u>6/18/13 HG/HG</u></p> |      |

Equipment  
MultiRae - RFW 23767  
GPS  
Camera - Olympus Stylus Touch RFW 23731

GPS Coordinates  
33.040556, -93.146944

203.09.13

2/Weston-082-13-005  
0002-42-13-05

1130 EPA OSC Chris Puhl activated START-3 David McCarty and Tori Gomby to provide a Tier 1 response to Magnolia, Arkansas for a 500 barrel oil spill. Responsible Party called to Lion Oil Trading & Transportation. Caller Glen Green reported a leak from the suction side of a line between a tank & a pump.

1320 START D McCarty and T Gomby depart Weston JTX office in Plano, TX for site in Magnolia AR GPS coordinates 33.240556, -93.140944.

### Health & Safety

Objective: Respond to site in timely manner, provide written & photographic documentation.

### Physical

Physical Hazards: Driving, traffic, slips trips falls, cold weather, hydration.

Chemical Hazards: Claude O.I., BTEX, flammable explosive.

Radiation Hazards: NORM, sunlight, ionizing.

Weather: Hi 75°F Mostly cloudy w/ 30%.

Chance of showers S winds 15 mph.

DS/ME DT for T6

03.09.13

tg

0002-42-13-05 2/Weston-082-13-005  
PPE: Level D PPE.

Hospital Info: Magnolia Regional Medical Center 101 Hospital Dr Magnolia, AR 71753 ph 870.335.3000. Head NE toward US 82W, turn left onto US 82W. Continue onto E Main St; turn right on N Jackson St; take the 3<sup>rd</sup> left onto E North St; take the 1<sup>st</sup> right onto N Washington St; Turn right onto Hospital Dr.

Allergies: David McCarty - Penicillin - no corrective lenses. Tori Gomby - no corrective lenses.

Signatures: David McCarty DS/ME DT  
Tori Gomby TG

LATE ENTRY 1445 PTL D McCarty called EPA OSC Mark Hayes to confirm Tier 1 response called in from EPA OSC Chris Puhl.

EPA OSC M Hayes concurred information.

LATE ENTRY 1300 START D McCarty called

EPA OSC Mark Hayes to inform him START was close to departure. EPA OSC said to call him when START team gets close to site.

1705 EPA OSC M Hayes called, he got ME DT for TG.

03.09.13

tg ~~0002-12-13-05 2/Wester-072-13-0051~~  
Arrived on site. He said to call  
Oden arrived.  
1754 START D McCarty and T Barnes  
arrive at Lion Oil Pipeline. RP John  
Warren who is with Lion Oil Trading  
Transportation stated the suction  
pump near the 12" transmission  
line (SCATA System) leaked due  
to internal corrosion. TAS Environ-  
mental on site RP clean up contractor  
~10 TAS personnel on site plus  
an additional 10 Lion Oil Trading  
Transportation (LOTT). Detex Refining  
Inc. is the parent company.  
Eldorado Pipeline LLC is the  
owner of the 12" pipeline & is  
also a subsidiary of Detex  
Refining, Inc. (DRI). At present  
7 VAC trucks on site. Spill  
unimpacted ~1.5 miles of creek  
1820 EPA OSC M Hayes returned  
from site walk through with  
George Garter (DRI) and Glenn  
Green (LOTT - Maintenance Engineer  
Superintendent). G Garter (Senior  
DRI MCIT for TG)

03.09.13

tg ~~0002-12-13-05 2/Wester-072-13-005~~  
Regulatory Specialist).  
1830 RP and EPA OSC M Hayes  
along with START discuss RP  
response plan. RP stated the  
leak stopped at 0900 on  
03.09.13. WIER 1 dam constructed  
at 1030 WIER 2 dam constructed  
at 1330. TAS Environmental  
arrived at 1245. RP planning  
night ops will reduce VAC  
truck to 5 due to personal  
hours. Currently off loading  
oil collected on site in <sup>03.09.13</sup>  
spare AST associate with  
Tanks battery.

EPA OSC M Hayes requested  
START to conduct mobile  
air monitoring ~~along~~<sup>03.09.13</sup> near  
neighboring houses. All air  
~~monitoring~~<sup>03.09.13</sup>

1905 START departs site and  
begin mobile air monitoring.  
Air monitoring for VOCs, H<sub>2</sub>S,  
O<sub>2</sub>, CO, & LEL.  
1915 START completed air monitoring  
D Mccart for TG

6 03.09.13

tg ~~0002-12-13-05~~ 2/Weston - 092-13-005  
 All mobile air monitoring outside tank remained at background levels for VOCs, H<sub>2</sub>S, CO & LEL at 0.0 & O<sub>2</sub> at 20.9.

1917 START departed area.

1920 START began searching for local hotels.

1955 START checked in, unloaded equipment. START will continue documentation.

Photo log - Olympus STYLUS TOUGH RFW 23731

| Photo# | Date   | Time | Photographer | Witness | Location  | Description |
|--------|--------|------|--------------|---------|---|-------------|
| 001    | 030913 | 1752 | tg dm        | SSE     | Pit dug to remove unused piping was filled w/oil.           | →           |
| 002    | 030913 | 1800 | tg dm        | SE      | Transmission station.                                       |             |
| 003    | 030913 | 1801 | tg dm        | NE      | Transmission station  |             |
|        |        |      |              |         | → Blue suction pump in foreground; release of oil           |             |
|        |        |      |              |         | → due west.   |             |
| 004    | 030913 | 1802 | tg dm        | NW      | Release of oil through file pipe S of transmission station. | →           |
| 005    | 030913 | 1802 | tg dm        | SE      | Release of oil through file pipe S of transmission station. | →           |
| 006    | 030913 | 1803 | tg dm        | ENE     | Released oil traveled E to tension pond.                    | →           |

DYMR CT for T6

03.09.13

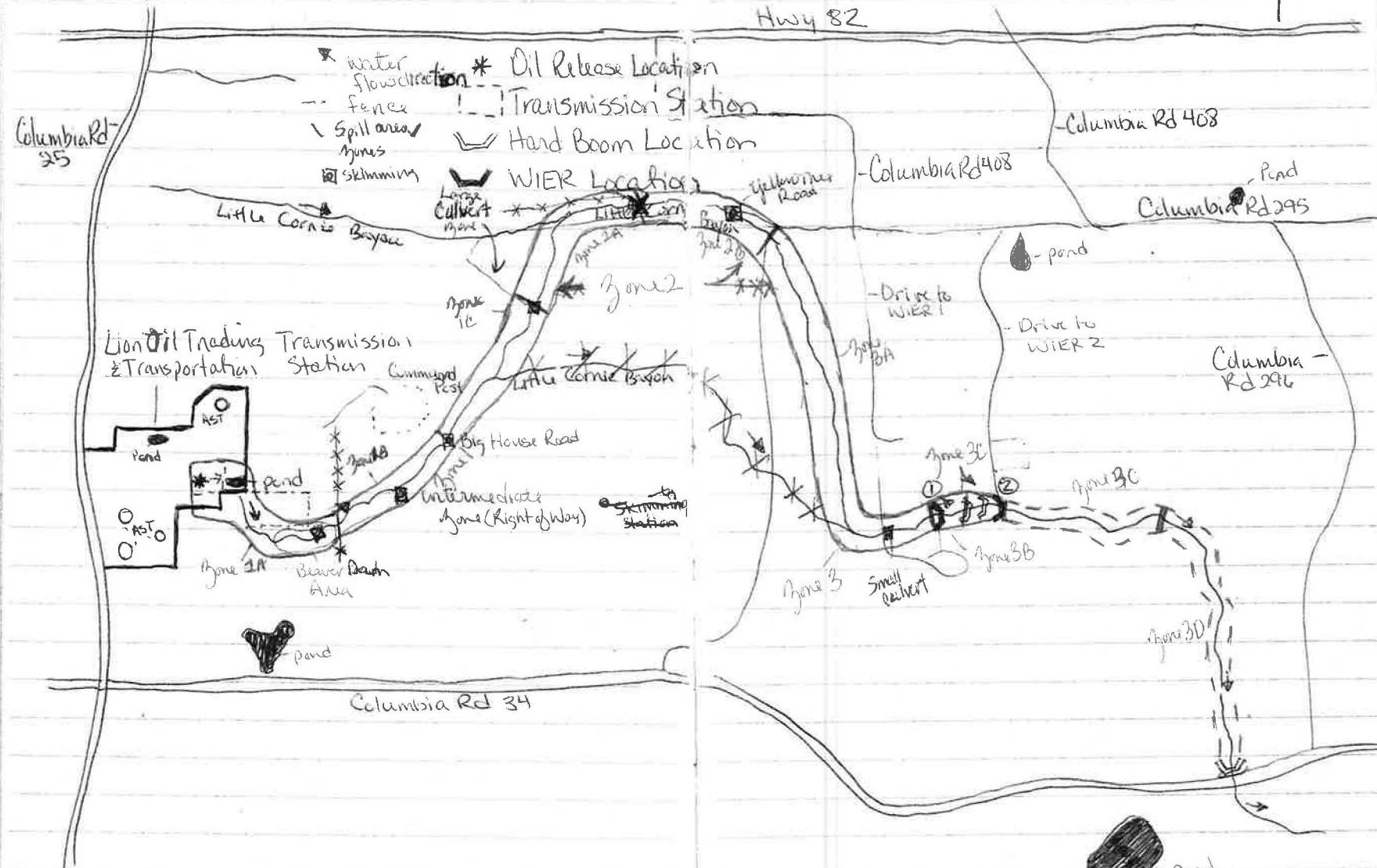
| Photo log Continued |        |      |              |         |   |             |
|---------------------|--------|------|--------------|---------|---|-------------|
| Photo#              | Date   | Time | Photographer | Witness | Location  | Description |
| 007                 | 030913 | 1803 | tg dm        | E       | Released oil traveled E to tension pond.  | →           |
| 008                 | 030913 | 1807 | tg dm        | NW      | Released oil travel E to tension pond.  | →           |
| 009                 | 030913 | 1804 | tg dm        | NW      | Tension pond filled with released oil.  | →           |
| 010                 | 030913 | 1806 | tg dm        | SE      | Released oil traveled from tension pond through tile pipe / overspill to Little Cornie Bayou. | →           |
| 011                 | 030913 | 1809 | tg dm        | SE      | Transmission Station.   |             |
| 012                 | 030913 | 1810 | tg dm        | SW      | Transmission Station.   |             |

FB 03.09.13

8 03.09.13

tg  
Site Map

0002-42-13-05 2/weston -042-  
13-005



Note: X mistake

DS n° 15 fo-T6

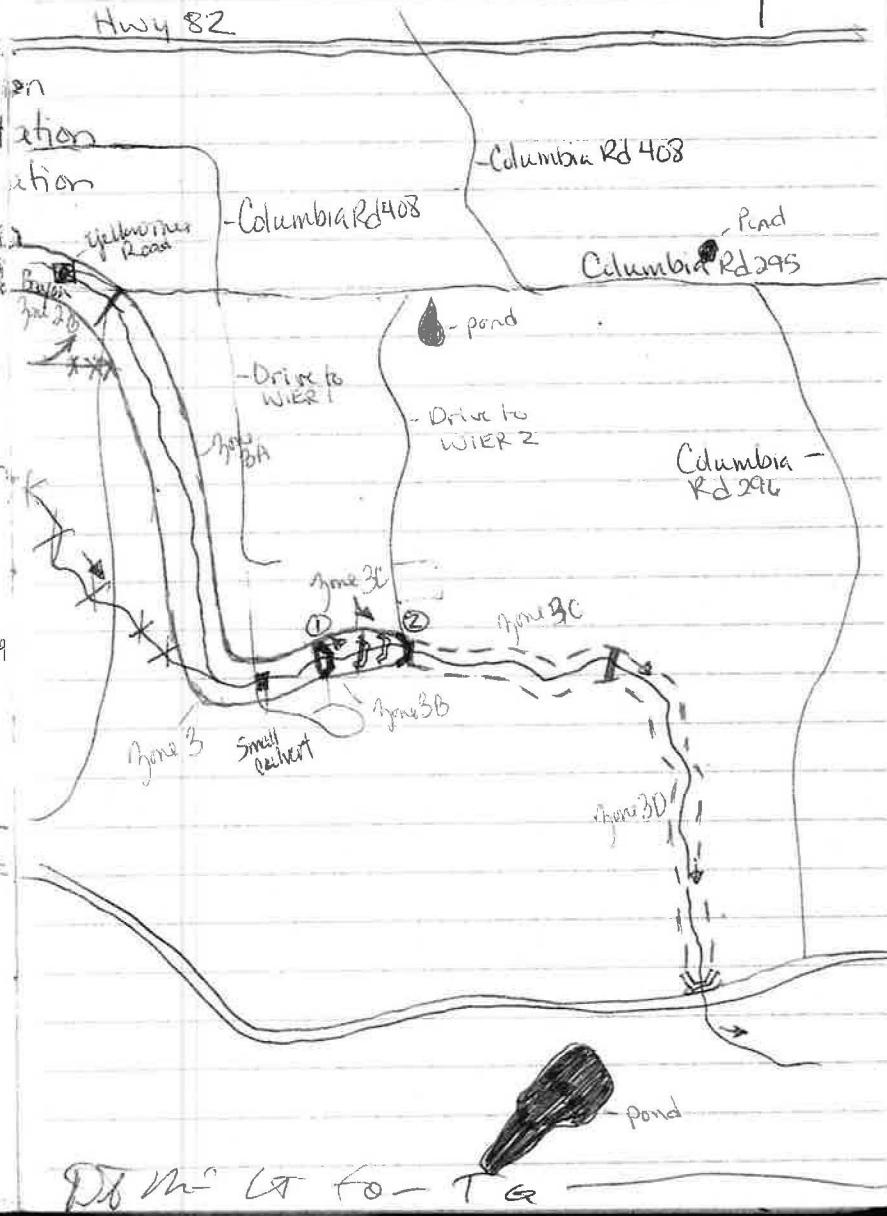
03.09.13

tg

0002-42-13-05 2/weston -042-13-005



Hwy 82



D8 m° 15 fo-T6

10.03.10.13

tg 0002-42-13-052/uketon-072-13-005  
0655 START departed to LOTT site  
0705 START arrived on site. EPA OSC  
MHayes arrives on site. —  
0708 OPS meeting, LOTT, DRI, EPA  
in attendance. Decon (TAS), Recovery  
of oil recovered so far (?) 3 loads  
at 115 barrel tankers. RP tasks  
for today, to focus on Pond due  
to in-coming rain. TAS rep. joins  
in OPS meeting. RP wants TAS to  
pump on pond. TAS stated 3tg, 6  
loads came out of pit and pond. —  
RP is using 25,000 AST on site to  
off load pumped oil from creek, pond,  
& pit. (2) VAC truck Composites 40, 55, 80, 70, 115, 250.  
Health & Safety: Any emergency 911  
is available MSSS available. Keep  
H2S meters going in work areas,  
proper disposal of PPE - decon area  
Task list: —  
Pit & Pond - Zone 1 —  
Pond - Well 1 - Zone 2 —  
Well - Well 2 - Zone 3 —  
Zone 1: (2) 18-wheeler trucks —  
Mike White contact —  
D. Dr. — CT for TG

03.10.13

11 tg 0002-42-13-052/uketon-072-13-005  
None 2B: Contact Jack Kinney —  
6 VAC Trucks —  
- Establish Decon Area on Tank  
\* battery for RP ERRS, roll-off box  
- Night OPS meeting 1900. —  
- CR 34 is ~~299~~ hard boom will  
be laid out downstream of zone 3.  
0818 RP David Wood & George  
Garten take START ID McCarty &  
TGomey around the boundary of  
the spill & air monitoring  
0823 Air reading background (Rainbow)  
upstream of LOTT Well 1 33.241603° N,  
-93.125164° W ± 33 ft. —  
Weather: Hi 64 Showers & Thunder-  
Storm S winds 5-10 mph becoming  
NW. 90% of rain. —  
0832 Arrive at Well 1 —  
Reading: O. O O<sub>2</sub>: 20.9 —  
GPS: 33.239388° N, -93.124503° W —  
0844 Well 2 location - START  
arrived to depart to. —  
Reading: O. O O<sub>2</sub>: 20.9 —  
GPS: 33.237132° N, -93.120997° W —  
0846 Depart to boom location to  
D. Dr. CT for TG

12 03.10.13

tg 0002-42-13-052/Westn-072-13-005  
be put in creek at CR 34  
0909 Reading near residential homes.  
O.O, O<sub>2</sub>: 20.9. —<sup>ts</sup>

0910 Reading continue to another  
residential area. O.O, O<sub>2</sub>: 20.9. —<sup>ts</sup>

0915 Arrived at Bridge on CR 34.  
GPS: 33.229909°N -93.111812°N —<sup>ts</sup>

0925 Depart to loop around &  
take readings. —<sup>ts</sup>

0951 Arrived at Lion Release Site.  
Reading on MultiRAE VOCs, H<sub>2</sub>S,  
CO & LEL continuous read 0.0.

O<sub>2</sub> 20.9. EPA OSC MHayes provided  
quantity of storage tank &  
recovered oil from spill (barrels)

| 03.09.13:1 GAUGE<br>(intank pump)<br>\$111 | Total   | Oil    | Water  | start<br>recovry<br>over<br>succ |            |
|--|---------|--------|--------|----------------------------------|------------|
| 1.2  | 1019.52 | 703    | 311.52 | -                                | -          |
| 03.10.13<br>(recovered oil)                | 6.5     | 5522.4 | 2548.3 | 2973.6                           | 690 1150.8 |

1054 START depart to CR 34 to  
observe RP to lay hard boom across  
creek. —<sup>ts</sup>

1059 START arrived at bridge on CR 34.  
RP & Crew on site. Boom (hard) laid  
out on the north side of CR 34 before  
DRAFT 8-T6 —<sup>ts</sup>

13 03.10.13

tg 2/Westn 0002-042-13005  
Creek crosses under CR. —<sup>ts</sup>  
1113 START departs to check  
on Wier 1 & Wier 2. —<sup>ts</sup>  
1126 START arrive at WIER 1  
RP putting down road base  
(3-6 inches) using track hoe &  
back hoe to make conditions  
better for VAC trucks entering/  
exiting. Hydrostatic Testing, Inc. assisting w/ VAC truck

LATE ENTRY 0800 EPA OSC MHayes stated  
to RP Greg Green & John Warren  
that he will sending Notice of  
Federal Interests (NOFI) to LOTT/DRI.

1107 EPA OSC MHayes call START  
McCarty with update. —<sup>ts</sup>

1209 START depart to Lion Tank Batter  
release site. —<sup>ts</sup>

1226 START at release site. —<sup>ts</sup>  
1330 EPA OSC MHayes & START  
depart for lunch. —<sup>ts</sup>

1330 Depart back to Response Site.  
EPA OSC MHayes would like to look  
at the hard boom put in on CR 34.

1408 Arrived at hard boom at CR 34.  
1415 Depart to WIER 1 & 2. —<sup>ts</sup>  
DRAFT 8-T6 —<sup>ts</sup>

14 03.10.13

tg 2/West 0002-42-1305  
1422 Arrived at Wier 2. RP putting down road base to assist getting VAC trucks & personnel back to WIER 2 & hard boom. Oil has passed hard boom & slowly making way to WIER 2. Some oil has collected in front of WIER 2. EPA OSC M Hayes and START walk upstream to observe oil between the WIERs. Significant amount of oil was observed. It was observed another hard boom was placed upstream from the other hard boom upstream from WIER 2. GPS

Kefford

1444 Depart to WIER 1 location.  
1501 Arrived at WIER 1. RP personnel stated to EPA OSC M Hayes that WIER 1 broke & release oil downstream sometime during the rain event (John Warren said ~1300 ft broke).  
1516 Depart to release site.

1529 Arrived at release site - Lin Tank Battery. EPA OSC M Hayes & START D McCarty discuss info w/ D McCarty for T6

03.10.13

15

tg 2/West 0002-42-1305  
RP, START T Gomey observe how to cross fence south of pond, where oil reached creek - Little Connie Bayou. EPA OSC M Hayes & START walk Creek. Take GPS coordinates & photo document. 1700 OPS meetings - RP, EPA attending meeting. Plan is for night OPS to continue skimming at (4) locations - Pond, Wier 1, Wier 2, & new location downstream gradient from pond & upgradient from Wier 1 at pipeline right-of-way. RT to night OPS will utilize (2) floating skimmers at new location & WER 1. Secondary containment (3sets) will arrive tonight & install them tomorrow. Approximately 30 personnel on site tonight with an additional 5 more personnel tomorrow. Crew will reduce tonight, number not known. (2) frac tanks on site. (1) at Pond & (1) at WIER 1. EPA OSC M Hayes stated he has been in contact with ADEQ and they will be DMR for T6

16 03.10.13

tg 2/Wester ~~0002~~ 042-13005

tomorrow 03.11.13.

1811 EPA OSC and START depart site.

1825 START arrive at hotel and unload equipment. Will continue documentation & upload to Response Manager (Photos).

#### Photolog

| Photo # | Date     | time | Azimuth | photos taken by witness | Description   |
|---------|----------|------|---------|-------------------------|---|
| 013     | 03/03/13 | 0725 | W       | tg dm                   | Little Canie Bayou crossing under road to WIER 1.                                       |
| 014     | 03/03/13 | 0726 | E       | tg dm                   | Little Canie Bayou crossing under road to WIER 1.                                       |
| 015     | 03/03/13 | 0736 | N       | tg dm                   | VAC trucks at WIER 1.   |
| 016     | 03/03/13 | 0736 | SSW     | tg dm                   | (1) Frac Tank station at WIER 1   |
| 017     | 03/03/13 | 0737 | NE      | tg dm                   | Earth burn with 6 inner pipes - WIER 1; oil upstream-left, clean water downstream-right |
| 018     | 03/03/13 | 0737 | NE      | tg dm                   | WIER 1 location.  |
| 019     | 03/03/13 | 0753 | NW      | tg dm                   | Hard boom located upstream of WIER 2.   |
| 020     | 03/03/13 | 0754 | SW      | tg dm                   | Hard boom located upstream of WIER 2.   |

25 min CT to T6

03.10.13

tg 2/Wester ~~0002~~ 042-13005

#### Photolog Continued

| Photo # | Date     | Time | Azimuth | photos taken by witness | Description  |
|---------|----------|------|---------|-------------------------|--|
| 021     | 03/03/13 | 0756 | SE      | tg dm                   | WIER 2 downstream of WIER 1 and hard boom.                                   |
| 022     | 03/03/13 | 0756 | SW      | tg dm                   | Upstream of WIER 2 no oil, no sheen.   |
| 023     | 03/03/13 | 0757 | SSE     | tg dm                   | Downstream of WIER 2.  |
| 024     | 03/03/13 | 0818 | NW      | tg dm                   | Little Canie Bayou N of CR 34. No oil /sheen.                                |
| 025     | 03/03/13 | 0819 | W       | tg dm                   | Little Canie Bayou S of CR 34.   |
| 026     | 03/03/13 | 1007 | NW      | tg dm                   | Hard boom placed N of CR 34 in Little Canie Bayou.                           |
| 027     | 03/03/13 | 1009 | W       | tg dm                   | Sheen appear on east bank of creek.  |
| 028     | 03/03/13 | 1030 | NNE     | tg dm                   | Road Base being put down for VAC truck traffic                               |
| 029     | 03/03/13 | 1404 | N       | tg dm                   | WIER 1 breached ~1300 ft WIER 1 rebuilt; downstream of WIER 1, oil released. |
| 030     | 03/03/13 | 1412 | NE      | tg dm                   | EPA OSC Mark Hayes observing released oil upstream of WIER 1                 |
| 031     | 03/03/13 | 1428 | ESE     | tg dm                   | Transmission Station-Sucker Unit oil release in foreground.                  |

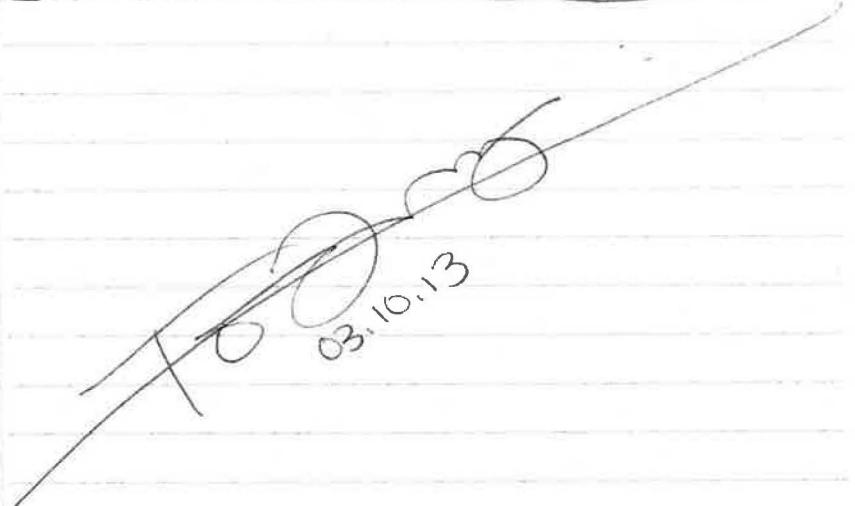
17

18 03.10.13

tg 2/Weston - 0002 042-13 005

Photolog Continued

| photo# | date     | time | direction | photographer | winddir | description             |
|--------|----------|------|-----------|--------------|---------|-------------------------|
| 032    | 03/03/13 | 1503 | SW        | tg dm        |         | Beaver dammed area      |
|        |          |      |           | tg           |         | between release site 2  |
|        |          |      |           | tg           |         | WER 1 location.         |
| 033    | 03/03/13 | 1508 | SE        | tg dm        |         | Beaver dammed area      |
|        |          |      |           | tg           |         | between release site 2  |
|        |          |      |           | tg           |         | WER 1 location          |
| 034    | 03/03/13 | 1509 | SE        | tg dm        |         | Beaver dammed area      |
|        |          |      |           | tg           |         | between released site 2 |
|        |          |      |           | tg           |         | WER 1 location          |
| 035    | 03/03/13 | 1519 | SW        | tg dm        |         | Little Cornie Bayou     |
|        |          |      |           | tg           |         | Cornie break together   |
|        |          |      |           | tg           |         | downstream after        |
|        |          |      |           | tg           |         | blowout claim.          |



03.11.13

tg 2/Weston - 0003 042-13 005

0750 START departs for LOTT release site. See Health & Safety pg 2-3. —<sup>tg</sup>

Weather: Hi 54°F Mostly Cloudy in the morning. West winds 10-15 mph.

0804 START arrive at LOTT release site. OPS meeting EPI CSC, LOTT, &amp; TAS on site.

Today Tasks: —<sup>tg</sup>Pond Action Items —<sup>tg</sup>1. Continue Pulling from Pond —<sup>tg</sup>2. Check level —<sup>tg</sup>3. Based water; may add water —<sup>tg</sup>Meet —<sup>tg</sup>

1. Continue Skinner EVAC truck Creek to another location
2. Move FRAC tank to beach location
3. Check level of FRAC; empty it to move.

Done 2 —<sup>tg</sup>

1. Use (2) 20 barrel VAC setups (double)  
bus FRAC tank to beach location
2. Haul to frac tanks then pump off tank to PST.

Intermediate Location —<sup>tg</sup>

- i. Add boom to this location to assist skimming / collection of oil.

Land Owners —<sup>tg</sup>

1. Contact for creek access —<sup>tg</sup>

TAS' House Keeping —<sup>tg</sup>DTRMCT for T6 —<sup>tg</sup>

20 03.11.13

tg 2/Weston - 0002042-13005

Roll off box on way for decon  
Operation Command Center

1. One complaint by resident about  
odor.

TAS Personnel Onsite: 11

LOTT Personnel Onsite: 9

It is estimated that 5000 barrels of  
oil was released and 1500 barrels  
left site.

0900 Larry Taylor (Office of Emergency  
Management) OEM arrived on site

0910 Chris Voss (Alderson Department  
of Environmental Quality) ADEQ arrives  
onsite. EPA OSC M Hayes discuss with  
ADEQ current operations & info.

LATE ENTRY 0845 1003 tank spill Recovery Unit

|              |         |                 |                  |       |          |
|--------------|---------|-----------------|------------------|-------|----------|
| 03.11.13     | [gauge] | total oil water | stabilized total | check | recovery |
| measured oil | 12.2    | 1036.5          | 4583.5177        | 2530  | 1350     |

0923 LOTT DR, ADEQ, EPA discuss water  
reuse (water collected during release  
cleanup), personnel & tasks.

1000 EPA OSC M Hayes tasked START to  
continue air monitoring the perimeter  
of the release.

1002 START departs site and begins  
DMC CT for T6

03.11.13

tg 2/Weston - 0002042-13005

air monitoring around perimeter of  
oil release.

1140 START arrived near WIER 2  
location. START observed (1) FRAC Tank  
within secondary containment  
onsite, (2) LOTT crew members, &  
(1) Doodle Buggy. At <sup>about</sup> boom upstream  
of WIER 2 oil surpassed this location  
& moved closer to WIER 2. At WIER 2  
soft boom downstream needs to  
be repositioned.

1200 START depart for WIER 1 location  
1206 START arrived at site (6-7) VAC  
trucks, LOTT personnel putting in place  
FRAC Tank into secondary contain-  
ment at WIER 1. Having issues  
with installation due to rain event  
yesterday causing the roadway  
to be soft. WIER 1 still holding A water  
was spotted earlier today and WIER  
site. Has been ~~taken~~ temporarily  
taken care of.

1233 START departs site to continue  
air monitoring.

1310 START arrived at LOTT oil release  
DMC CT for T6

22 (3.11.13)

tg 2/Weston 0002-DH2-13-005  
On site. Readings on Mini-RNE: 200  
VOCs, H<sub>2</sub>S, CO & LEL continuous read 0.0  
O<sub>2</sub>: 20% had some spikes 21.1 & 21.3.  
in low areas on south boundary.  
1320 EPA OSC M Hayes and START  
depart site.

1435 EPA OSC and START arrive onsite  
at LOTI oil release.

1443 START departs for observe the  
intermediate. TAS crew (5) skinning  
at makeshift containment made of  
2x6 board. START T Gomey will walk  
up stream from intermediate to LOTI  
release site. START McCarthy will head  
back in ER truck and begin paperwork

1551 START T Gomey met with Barry  
Pindexter, property owner who backs  
up to the Lion Oil property. The affected  
creek runs through his property.  
START T Gomey provided owner with  
EPA OSC Mark Hayes name & phone  
number.

1620 START T Gomey met back up with  
START D McCarty.

1625 START departed to LOTI release site.  
D. Dm' C. T. P. - T G

03.11.13

tg 2/Weston 0002-DH2-13-005  
1700 OPS meeting: 2P, TAS, EPA discuss  
Alternatives to getting more personnel  
on site. TAS suggests skinning off  
oil then debris & veg removal.  
• Shoring up the WIERs for temporary/  
permanent. (18-20) RP personnel  
coming tomorrow (03.12.13). Bring  
in water to start flushing up stream  
at pond. (20) J Christy personnel will  
be called in to assist. Clean up.  
• June 2 will be broken down into  
sub zones. At present 5 sub zones  
will be established. Planning at  
bring in addition cleanup contractor.  
Oil Mop (om 1) will be brought in  
if available, if not ACME Environ-  
mental will be contacted. Including  
RP, TAS, Contractor, J Christy 60-70  
personnel will be onsite. Night OPS  
will consist of (3) RP personnel  
which will monitor WIER 1 & WIER 2.  
LOTI & TAS will be on call through  
the night.

LATE ENTRY 1855 EPA OSC M Hayes  
stated to LOTI personnel resources  
Dm' C. T. P. - T G

24 03.11.13

tg 2/Weston 03.12-13-005

be brought in to assist activities.

**LATE ENTRY** 1610 LOTT began to build road access to Beaver Dam area SE of release of oil into creek, with a chipper track hoe. Clearing a path to put in road.

1817 START and EPA OSC M Hayes depart site.

1830 START arrived at hotel & unload equipment. START will continue documentation, upload info to Response Manager.

Photolog

| photo # | Date     | Time | Direction | photographer<br>with notes | Description  |
|---------|----------|------|-----------|----------------------------|--|
| 036     | 03.11.13 | 1143 | SE        | tg dm                      | Frac Tank in secondary container at WEIR 2                             |
| 037     | 03.11.13 | 1143 | NW        | tg dm                      | Bubble Buggy (20) barrel<br>VAC tank at WEIR 2                         |
| 038     | 03.11.13 | 1148 | SW        | tg dm                      | Hard boom upstream<br>from WEIR 2 where<br>release oil passed contain- |
| 039     | 03.11.13 | 1150 | SW        | tg dm                      | ment after rain event 03.10.13<br>Oil & sheen upstream<br>of WEIR 2.   |
| 040     | 03.11.13 | 1150 | SW        | tg dm                      | WEIR 2   |

03.11.13

tg 2/Weston 03.12-13-005

Photolog Continued

| Photo # | time | Date     | direction | photographer<br>with notes | Description  |
|---------|------|----------|-----------|----------------------------|--|
| 041     | 1201 | 03.11.13 | SW        | tg dm                      | Little Cowie Bayou<br>before crossing beneath<br>road to WEIR 1.                 |
| 042     | 1201 | 03.11.13 | SE        | tg dm                      | Little Cowie Bayou<br>on E side of road<br>to WEIR 1.                            |
| 043     | 1208 | 03.11.13 | NE        | tg dm                      | Reinforced WEIR 1.   |
| 044     | 1212 | 03.11.13 | N         | tg dm                      | Reinforced WEIR 1.   |
| 045     | 1518 | 03.11.13 | E         | tg dm                      | Intermediate oil<br>collection point in<br>right-of-way up-<br>stream of WEIR 1  |
| 046     | 1521 | 03.11.13 | E         | tg dm                      | Intermediate oil<br>collection point in<br>right-of-way up-<br>stream of WEIR 1. |

X-60 03.11.13

26 03.12.13

tg 2/West 002 042-13-005

0750 START DMCarty and TGroney depart to LOTT oil spill site. Health & Safety see page 2-3. Weather: Hi 65°F Mostly clear in the morning then becoming partly cloudy. N winds 5 mph. Physical Hazards: Windbreakers, stamp holes covered by leaf debris. Current Temp 39°F

Signatures: David McCarty DM<sup>CT</sup>

Tom Groney TG<sup>CT</sup>

0802 START arrive at site. EPA OSC M Hayes arrive on site. Contractor OMI on site. TAs has more equipment on site.

0805 OPs meeting: TAs Mike stated Oil Map on site. ACME to arrive 0900-1000. Over night OPs all good over night. Contractor task to monitor LELs. Contractor Code 3 onsite.

ACME: (2) drum skimmer

(1) four wheeler

(2) floating pumps

(8) personnel

OMI: (16) personnel

(2) drum skimmers

(1) Sorbent trailer

DMC<sup>CT</sup> for TG

03.12.13

2/West 002 042-13-005

Code 3: (7) personnel —  
TAS: (11) on site —

Office trailer coming, in is placed near the intermediate zone.

EPA OSC M Hayes tasked START to observe operations from release into creek to WIER 1 & air monitor

0810 RP provided 1003 tank spill recovery liner.

| date     | spill | total | oil   | water | start | over |
|----------|-------|-------|-------|-------|-------|------|
| 03.12.13 | 13.4  | 11385 | 14928 | 6457  | 2870  | 1350 |

Mixed oil from pond no oil recovered from creek. Oil from creek placed in frac tanks (at WIER 1 & WIER 2).

0849 START depart site to conduct air monitoring.

0955 START arrived at the Beaver Creek<sup>Dam</sup>, Cleaning Operations. Road front<sup>s</sup> initial operations beginning - tree removal, brush, & veg removal for road way & access to Beaver Dam. Poly laid down in static areas for clean up efforts (debris removal staggings areas). Crews getting organized for cleaning activities.

1031 START depart Beaver Dam.

1048 START arrived at WIER 1 location. (1) VAC DMC<sup>CT</sup> & TG

27

28.03.12.13

tg 2/Weston 0002 042-13005  
truck Skimming from creek into flame tank at site. Flame tank was secondary containment. EPA OSC M Hayes arrives.

1117 START depart to WIER 2.

1125 START arrived at WIER 2. RP placing mats (wooden) down to reach location of WIER 2 booms. Doodle buggy continuing skimming at hard boom area upstream of WIER 2.

1135 EPA OSC M Hayes joins START during observations at WIER 2.

1205 EPA OSC and START depart WIER 2.

1224 START arrived at CR 34 culvert. Hard boom and soft boom.

1231 START depart to LOTT site.

1240 START arrives at LOTT site. Reading on Multi RAE:

VOCs, H<sub>2</sub>S, CO & LEL continuously read 0.0  
O2: 20.9

1301 EPA OSC M Hayes and START depart site for lunch.

1401 EPA OSC M Hayes and START arrive onsite. ADEQ John Voss & Jason Whitsett are on site at LOTT. Don Lamb DMRG G-TG

03.12.13

tg 2/Weston 0002 042-13005  
1420 START DMcCarthy was tasked from EPA OSC to start working on site map. START T Gorney tasked to photo document LOTT transmission tanks and overall facility.

1507 START T Gorney observed LOTT is working on repairs at the initial release site at the sucker pump. Soil removed west & south west to expose piping.

1510 Pumping / Skimming from the retention operations were ceased yesterday. Small oil pools remain at the bottom of the pond.

1512 Several deceased turtles were seen along the banks of the pond. They were covered in oil.

1545 START T Gorney discuss with EPA OSC M Hayes about the turtles. He said ADEQ stated there are no endangered species in the area.

1559 START T Gorney meets back up with START DMcCarthy.

1645 Hydrostatic (2) tankers arrive on site bring fresh water.

DMcCARTHY T G

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30.03.12.13

tg 2/West 0002-042-13005

1700 OPs meeting.

Personnel on site: (3) ER Contractors  
(18)- LOTT — (1) Tree Trimmers Mack  
(90?) Personnel on Site (1) - J Kristie

TAS  
LOTT  
Tree  
Mack

- TAS - Good progress from initial to bottom of Beaver Dam. Flushing will begin shortly. (1) roll-off boxes will come to site tomorrow morning.
- Profiling of roll-off boxes. LOTT will sample. TAS will set up where roll-offs will go to for disposal.
- WIER 2 road will be finished.
- tomorrow (1) Double Barge is still skimming.
- Logistics water, ice, 3-way radios.
- Health & Safety - Mustel gone in both areas. General Safety 0700-0730 for the Contractor. Rattle Snakes are out, black vultures, poison ivy / oak, traffic (speeding).

- Air monitoring - data logging, personal monitoring. Code 3 monitoring.

1735 EPA OSC & START discuss

tasks for tonight & beginning tomorrow

1801 START departs to large culvert

1) Direct to - T6

03.12.13

tg 2/West 0002-042-13005

1814 START arrives at Culvert off Co Rd 408 (see site map). (1) VAC truck skimming oil using floating skimming on the west side (upstream) of culvert.

1817 START departs to hotel.

1840 START arrive at hotel. Will continue document action, upload info to Response Manager & unload equipment.

#### Problems

| phot # | date     | time | direction | proto? | witness?                               | Description   |
|--------|----------|------|-----------|--------|--|---|
| 047    | 03/12/13 | 0954 | SSW       | tg dm  | to dm                                  | Newly constructed road leading to Beaver Dam clean up.                                |
| 048    | 03/12/13 | 0958 | SW        | tg dm  | to dm                                  | Initial operations at Beaver Dam Area.  |
| 049    | 03/12/13 | 0959 | SW        | tg dm  | to dm                                  | Hard on downstream area of Beaver Dam Area.   |
| 050    | 03/12/13 | 1005 | SW        | tg dm  | to dm                                  | TAS Contractors cutting under brush along Beaver Dam area to gain access for cleanup. |
| 051    | 03/12/13 | 1100 | N         | tg dm  | VAC truck & frac tank staged at WIER 1 | VAC truck & frac tank staged at WIER 1  |
| 052    | 03/12/13 | 1104 | S         | tg dm  | WIER 1 in foreground.                  | WIER 1 in foreground.   |

Not Me 1A for T6

31

32 03.12.13

tg 2 West 0002-042-13005

## Photo Log Continued

| photo # | date     | time  | direction | photog.<br>witness | description  |
|---------|----------|-------|-----------|--------------------|--|
| 053     | 03/21/13 | 11:05 | SW        | tg dm              | Upstream of WIER 1,<br>skimming continues.                   |
| 054     | 03/21/13 | 11:29 | SW        | tg dm              | Installation of road<br>mats at WIER 2.                      |
| 055     | 03/21/13 | 11:29 | SW        | tg dm              | Installation of road mats<br>by LOTT personnel at<br>WIER 2. |
| 056     | 03/21/13 | 11:36 | SW        | tg dm              | Released oil in area<br>upstream of WIER 2.                  |
| 057     | 03/21/13 | 11:36 | NW        | tg dm              | Hard boom removed from<br>area upstream of WIER 2            |
| 058     | 03/21/13 | 11:37 | W         | tg dm              | Doodle Buggy, skimming<br>at upstream area of WIER 2         |
| 059     | 03/21/13 | 11:38 | W         | tg dm              | Doodle Buggy, skimming.                                      |
| 060     | 03/21/13 | 11:40 | SW        | tg dm              | Hard boom holding back<br>released oil reaching WIER 2.      |
| 061     | 03/21/13 | 11:40 | SE        | tg dm              | WIER 2 location.   |
| 062     | 03/21/13 | 11:44 | SE        | tg dm              | Downstream of WIER 2.  |
| 063     | 03/21/13 | 12:26 | NW        | tg dm              | Hard & soft boom on N<br>side of CR 34 culvert.              |
| 064     | 03/21/13 | 12:27 | SW        | tg dm              | Soft boom on S side of<br>CR 34 culvert.                     |
| 065     | 03/21/13 | 14:39 | E         | tg dm              | Tank 1003 at LOTT site.                                      |

DPMC for TG

03.12.13

2 West 0002-042-13005

33

## Photo Log Continued

| photo # | date     | time  | direction | photog.<br>witness | description  |
|---------|----------|-------|-----------|--------------------|--|
| 066     | 03/21/13 | 14:40 | E         | tg dm              | Discharge / Hook up to<br>10053AST at LOTT site.               |
| 067     | 03/21/13 | 14:56 | ESE       | tg dm              | Discharge / Hook up on<br>N side of 10053AST.                  |
| 068     | 03/21/13 | 14:57 | SE        | tg dm              | Close up of discharge /<br>hook up                             |
| 069     | 03/21/13 | 15:07 | NE        | tg dm              | RP repair sucker pump  |
| 070     | 03/21/13 | 15:07 | NE        | tg dm              | RP repair sucker pump  |
| 071     | 03/21/13 | 15:08 | SW        | tg dm              | Piping removed feeding<br>to sucker pump was<br>cause of leak. |
| 072     | 03/21/13 | 15:13 | NW        | tg dm              | Area dug up to remove<br>damage piping to sucker<br>pump       |
| 073     | 03/21/13 | 15:13 | W         | tg dm              | Decreased oil levels at<br>detention pond.                     |
| 074     | 03/21/13 | 15:20 | SE        | tg dm              | RP skinning oil from<br>pit at transfer station.               |
| 075     | 03/21/13 | 18:15 | SW        | tg dm              | VAC truck at Large Culvert<br>S of CR 408.                     |
| 076     | 03/21/13 | 18:15 | W         | tg dm              | Floating skimmer at Large Culvert                              |
| 077     | 03/21/13 | 18:15 | E         | tg dm              | Downstream of Large Culvert.                                   |

DPMC for TG

34 03.13.13

tg 2/13/2013 012-1305  
0745 START with McCarty & Teoney depart to Lion City Magnolia Oil & Gas Health & Safety Dept pages 2-3.

Weather: Mostly clear in the morning then becoming partly cloudy. Hi 61°F. NE winds 5 mph. Temp Now: 37°F

Physical Hazards: Snakes are out were snake guards, poison ivy.

Signatures: David McCarty  
Tori Gomey To - Dry

0800 START arrive at site.

OPS meeting: RP, EPA, ADEQ, TAS, UMI, COKE 3, ACME

-Air Monitoring - calibration data requested by RP to contractor (TAS). TAS will have mobile & stationary stations.

(10) personnel H<sub>2</sub>S spot monitors.

-TAS suggests to properly split up current zones. Will take a day or so to get organized personnel & equipment.

Command Post in right of way is still setting up.

-Contractor H<sub>2</sub>S meeting went over animals, sunblock, mosquito spray, stationed, Logistics, org. chart.

Notes: Scott Wagen (LOI) replace George Domes at Br T6

03.13.13

tg 2/13/2013 012-1305

-EPA OSC M Hayes suggests to place absorbant boom strategically along the creek.

-No change on level in 1003 AST.

0830 EPA OSC M Hayes & START discuss tasks for the day.

0835 ADEQ John Foss joins in discussion. This PM too.

0912 START depart to check the different zones.

0935 START arrives at CR 34 culvert. START notices slight oil odor at creek.

0938 START departs to WIER 2.

0950 START arrives at WIER 2. Installation of road mats to WIER 2 almost completed. Road mats are clear down to WIER location installation of final mats for turn around area. No skimming yet.

1011 START depart for WIER 1.

1019 START arrives at WIER 1.

1021 EPA OSC M Hayes arrives at WIER 1 (INV Truck skimming & then empty into Sludge Tank staged at WIER 1).

Sluenera bbl is utilized to scoop DOME at Br T6

35

36 03.13.13

10 2/deston-002 042-13005  
Vegetation debris from out of the floating skimmer. The veg debris is then scraped out & bagged & taken to roll-off box.

1040 START departs WIER I.

1055 Arrived at Command Center near Beaver Dam. Discuss Logistic #s with RP contractor.

1125 START will begin walking the creek starting at right of way downstream of Beaver Dam.

1234 START arrives at Big Culvert Skimming area. Small to medium size pockets of oil within creek bank. When your event came in on 03.10.13 a couple of spots creek went over the bank leaving oil on bank. No OMI TAS RP Contractor at big culvert area.

1249 START departs to Command Center by foot.

1324 START arrived at Command Center space w/ TAS RM MIKE about the center of the creek from right of way to Big Culvert.  
DDCIT B-76

03.13.13

10 2/deston-002 042-13005  
1332 EPA OSC M Hayes departing Command Center. START updated him with the events START did & saw.

1350 START departs site for lunch. Current temp 59°F NE winds 11 mph.

1450 START arrives back at LOTT Command Center. Operations at Command Center. RP Contractor (foreman) for the Beaver Dam area stated there are ~20-30 personnel cleaning, raking, bagging leaf & brush debris from Beaver Dam. Crew has gone through & open the channel open. (3) roll-off boxes of leaf litter have already gotten out of the area. Crews are working from access road (west of Command Center) upstream to initial release site. (7) floating skimmers at bottom of Beaver Dam hooked up to VAC truck. A Doodle Buggy skimming ~50 yds upstream.

1620 START discovered a recent hole in unknown 4" pipeline. brought the hole to the TAS foreman. The hole was marked & placed B/T 6.

37

38 03.13.13

- tg 2/Weston 0002-012-1305
- 1650 START Depart to LOTT site for Q3 meeting.
- 1655 START arrived at LOTT Site.
- 1705 OPS Meetings:
- WIER 2: (40) bbl (2) load today with more today. (6)(18) bbl derricks buggy has skinned. Blowers on site. Rope Skinner coming. Skin all night
  - TAS bringing more equipment again is 2 skimmers per truck.
  - Beaver Pond - (2) rolling boxes full of debris. Zone 1 subdivided into 3 sub-zones. Hitting hard with crews. Skimmers, backwash, will begin washing tomorrow.
  - (3) SKIMMERS currently at Beaver Pond.
  - (20) Crew for G Kristie.
  - Site Security Columbia County Deputy On Site starting 1900 to 0600.
  - 2-way radios (2) to be used throughout site for foreman.
  - Logistics - moving well, things
  - Notification of media has been notified EPA made it aware at meeting.
- District 10 for T6

03.13.13

39

- tg 2/Weston 0002-012-1305
- WIER (2) drum skimmers.
  - FIMSA was on site today.
- 1800 EPA OSC MHayes & START depart site.
- 1804 START arrives at hotel unloads equipment from truck. START will continue documentation & upload to Response Manager.
- LATE ENTRY** 1716 Code 3 provided Air monitoring activities:
- Analytics
- Summary of Community Real-Time Air Monitoring
- | Analytics | Total # of Readings | Number of Dectcts |
|-----------|---------------------|-------------------|
| LEL       | 10                  | 0                 |
| VOCs      | 10                  | 0                 |
- Summary of Work Area Real Time Air Monitoring
- | Analytics | Total # of Readings | # of Dectcts |
|-----------|---------------------|--------------|
| LEL       | 47                  | 0            |
| VOCs      | 93                  | 4            |

Most detection of VOCs in work area confirmed as interference from diesel exhaust. Max reading 5.2 ppm VOC was documented when crew disturbed pocket of oil. Some readings could not be confirmed w/ second instrument.

District for T6

40 03.13.13

tag 2/Western 0002-042-13-005

Summary of Code 3S Air Monitoring Activities  
for 03.13.13:

Summary of Community Real-Time Air Monitoring

| Analytes | Total # of Readings | # of Detections |
|----------|---------------------|-----------------|
| LEL      | 11                  | 0               |
| VOCs     | 11                  | 0               |

Summary of Work Area Real-Time Air Monitoring

| Analytes | Total # of Readings | # of Detections |
|----------|---------------------|-----------------|
| LEL      | 34                  | 0               |
| VOCs     | 36                  | 3               |

Detections:

- 0953 A detection of 1.9 ppm VOCs on MultiRAE plus. Source was an excavator in upwind vicinity of meter.
- 1105 A detection of 4.0 ppm VOCs was recorded verified by different monitors began removing debris from beaver dam.
- 1421 A detection of 1.3 ppm VOCs was documented at eastern skinning area. Reading from chain saw crews using for debris removal.

Photolog - Photographic: tag Witness: dm

| photo | date     | time | direction | description                 |
|-------|----------|------|-----------|-----------------------------|
| 078   | 03.13.13 | 0955 | NW        | Upstream of WIER 2 location |
| 079   | 03.13.13 | 0955 | SW        | Upstream of WIER 2 location |

28mrt tag T6

03.13.13

tag 2/Western 0002-042-13-005

Photolog Continued

| photo | date     | time | direction | description   |
|-------|----------|------|-----------|---|
| 080   | 03.13.13 | 0956 | SW        | Hand boom upstream of WIER 2                            |
| 081   | 03.13.13 | 0956 | SE        | WIER 2.   |
| 082   | 03.13.13 | 1009 | S         | Long Reach Forklift installing road mats at             |
| 083   | 03.13.13 | 1010 | S         | Newly installed road mats leading to WIER 2.            |
| 084   | 03.13.13 | 1016 | WSW       | Culvert heading to WIER 1 (W).                          |
| 085   | 03.13.13 | 1016 | SE        | Culvert heading to WIER 1 (E).                          |
| 086   | 03.13.13 | 1028 | NW        | LOTT personnel taking leaf debris from roller skimmer   |
| 087   | 03.13.13 | 1029 | W         | LOTT personnel taking leaf debris from roller skimmer.  |
| 088   | 03.13.13 | 1151 | WSW       | Little Cornie Bayou down-stream from right of way.      |
| 089   | 03.13.13 | 1216 | SE        | Little Cornie Bayou down-stream from right of way.      |
| 090   | 03.13.13 | 1216 | SW        | Little Cornie Bayou down-stream from right of way.      |
| 091   | 03.13.13 | 1528 | NE        | Command Center / Staging area NE of Beaver Dam location |
| 092   | 03.13.13 | 1529 | N         | Command Center / Staging area NE of Beaver Dam          |
|       |          |      |           | Location.   |

DX 12/17 for T6

41

42 03.12.13

tg 2/Weston 0002-012-13005

Photolog Continued

| shot | date   | time | direction | description  |
|------|--------|------|-----------|--|
| 093  | 031313 | 1529 | NW        | Staging area for roll off<br>box at Command   Staging<br>for contaminated debris.  |
| 094  | 031313 | 1553 | SE        | VAC truck at E end of<br>Beaver Creek sucking off<br>2 skimming oil.               |
| 095  | 031313 | 1554 | SSE       | Contactors working &<br>removing contaminated debris                               |
| 096  | 031313 | 1559 | S         | RP Contactors working,<br>blowing, & bagging contaminated<br>debris at Beaver Dam. |
| 097  | 031313 | 1559 | S         | RP Contactors taking bags<br>of contaminated debris to                             |
| 098  | 031313 | 1602 | SW        | staging areas for pickup<br>Doodle Buggy Skimming<br>oil at Beaver Dam.            |
| 099  | 031313 | 1613 | S         | RP crew clean debris off<br>creek bank S of release<br>area.                       |

160  
03.13.13

03.13.13

tg 2/Weston 0002-012-13005

0900 START HQC

0905 START McCarty and Turvey  
depart to LOTT site.

Health &amp; Safety see pages 2-3.

Physical Hazards: When walking creek  
watch out for undercutting <sup>banks</sup> of the  
creek.Weather: Current temp: 34°F

Most clear Hs in the lower 70's.

SW wind 10 mph. ~~1. McCarry Day 2. MCH~~  
0313 OPs meeting underway; LOTT

TIB, OMI, CODE 3, ACME.

- TAS will begin networking the air  
monitoring station w/ real time- 5% LEL at 1532 reported at Beaver  
dam on 03.13.13.- Five full TCLP analysis for disposal  
by Friday (03.15.13).-(3) additional skimmers will deploy  
at WERZ.- JKrisie crews up to (30) 2 crews  
clean up & gate security.- Adding additional access to Beaver  
Dam on south side.0900 START depart command center  
28MCAT for 16

43

44 03.14.13

tg 2/West - 0002842-13-005

for daily reconnaissance of the site.

RP reported 5000 bbl of oil was released from the pipeline to Sucker pump.

0905 START team departed site to refuel and get field drinks.

1000 Emergency call hands meeting for START (Weston only).

1100 START depart to Lion Oil Magnolia Spill.

1112 START arrived at CR 34 culvert.

All normal. Begin air monitoring with multiRAE

1148 START depart to WIER 2.

1128 START arrives at WIER 2. Received message from EPA OSC to meet him at LOTT office.

1144 START and EPA OSC arrive at LOTT office.

1149 EPA OSC and START depart site for lunch.

1255 EPA OSC and START arrived at LOTT site.

1311 START Depart for WIER 2.

1332 START arrived at WIER 2. Spoke with RP Foreman Jack. (1) VAC truck DTM'd for P6

03.14.13

tg 2/West - 0002842-13-005

09 loading from frac tank to VAC truck. (1) VAC truck & (1) Doodle Buggy upstream from WIER 2 <sup>skimming</sup> (3) <sup>RP</sup> crew members blowing oil to skimmer

(1) racking oil into skimmer. At WIER 2

(1) VAC truck & (1) doodle buggy each attach to either a roller skimmer or floating skimmer.

(1) roller skimmer just arrived at 1400. The floating skimmer is being replaced with roller skimmer.

1408 START departs to WIER 1.

1433 START arrived at WIER 1.

(3) RP crews blowing upstream bring oil to roller skimmer. It has been requested for a personnel to get in w/ weeders to scoop out contaminated log debris. Another hand boom installed at WIER 1 to assist with collection of oil.

This requested by EPA OSC. (1) 80 bbl VAC truck skimming then off loads into frac tank once a day.

1443 START Departs to Big Culvert.

1501 START arrived at Big Culvert. On 21st the CT for T6

45

46 03.14.13

tg 2 West - 0002-042-13-05  
on site (2) crew members. Using roller  
Skimmer (1) 70 bbl VAC truck skimming.  
One stated they are "blowing off"  
off loading every ~~completely~~ other day.  
Crews are to come out to start  
blowing. Does not know when. Air  
monitor on site.

1530 START depart to Command / —  
Staging area. EPA CSC McKeyes  
down near Beaver Dam area. —  
START discuss conditions of WIER 2  
where the oil is too close to WIER.  
START also discuss air monitoring  
with RP contractor Code 3. —  
Neil START heads down to Beaver

downstream end rope skimming  
being utilized. Racking, & blowing  
continuing. Road entry being opened  
down stream of beaver dam area.

Crew working on culvert installation  
to access creek on south side. ACME  
crew up on stream <sup>03.14.13</sup> initial entry  
of oil spill to creek bank washing.

1653 START D McCarty heads back  
to Command Center (Staging for  
DMC IT to T6)

47

2 West - 0002-042-13-05  
1700 OPS meeting. START T6omey  
heads to LOTT transfer station  
to observe activity at the  
detention pond. —  
1705 START T6omey arrives on site at  
Retention pond. Large truck has  
working leveling soil at bottom  
of retention pond. New pipe  
with valves installed. Small pools  
of oil remain at bottom of retention  
pond. START T6omey talks w/ RP  
worker about piping at detention  
having two valves on it instead  
of just one. The other pipe had  
a delicate stack & no valve on it.  
1741 START T6omey arrives at  
Command Center Staging area  
Meet back up w/ START D McCarty.  
1618 START and EPA OSC depart to  
WIER 2 location.

1832 EPA OSC & START arrived at  
WIER 2.

1850 EPA OSC & START depart  
site.

1915 START arrived at hotel unboxed  
DMC IT for T6

03.14.13

tg 3/WSTN 006242 - 13 405

### Equipment

LATE ENTRY 1754 Readings on MultRAE  
VOCs, H<sub>2</sub>S, CO & LEL continuously read 0.0%  
O<sub>2</sub>: 20.9 throughout the day.

LATE ENTRY 1755 OPS meeting:

- (3) additional drum skimmers & (1)  
<sup>skimmer</sup>  
rope skimmer added to inventory.
- One skimmer to drum
- Added at skimming to Big House

### Road

- Added an additional drum skimmer to  
WIER 2. The rope mop skimmer  
went to Beaver Dam and a drum  
skimmer.

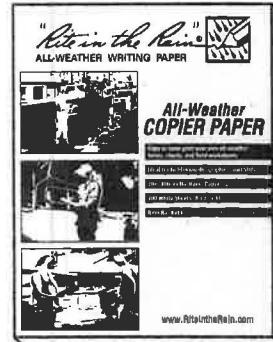
- (2) additional drum skimmers en route.
- WIER 2 RP crew working on a bigger  
buffer between oil spill & WIER.
- Work to clear up flow between  
Beaver Dam & Large Culvert.

- Establishing subzones in Zone 1.  
- ADEQ ok Micro-blaze at 3% solution  
EPA will verify if micro-blaze can be  
used.

- (8) loads of water have been removed  
from 1003 tank taken to refinery  
for processing.  
DG MCT for TG

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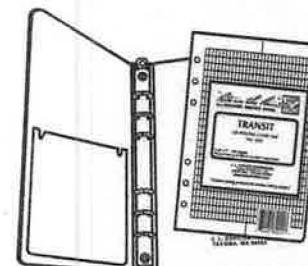
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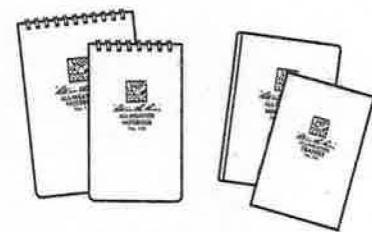
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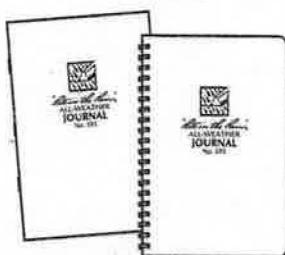
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Lion Oil Magnolia Spill  
FPN: E13610

NRC No. 1040525

26106 012.062.0799.01

TOD No. ~~0002-042-13-05~~ dm

2/08/08-042-13-005

Logbook 2 of 4

INCH



Name PTL David McCarty

Address 3900 Dallas Pkwy Ste 175  
Plano TX 75093

Phone 469.666.5500

Project Lion Oil Magnolia Spill  
2 Wester

TOD No. 0002-012-13005  
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EPA OSC Mark Hayes

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#### CONTENTS

| PAGE | REFERENCE | DATE |
|------|-----------|------|
|      |           |      |

SCRIBE: Teri Gomez (tg) T-2  
Field Notes David McCarty (DM) D.M.M.P.W.  
Field Map: logbook Log 8-9

Logbook Reviewer: Hilary Gafford (HG)  
6/18/13 (XGafford)

#### Equipment

MultRAE + RFW 23767

GPS

Camera - Olympus Stylus Touch RFW 25781

#### GPS Coordinates

33.240356, -93.1416944

2 03 14.13

tg 2/03/13 0802-042-13805

Continue late entry meeting from logbook 1:

- (4) air monitoring units have been deployed to station utilizing wireless technology. The (4) station within working.
- (2) additional station will be added with (1) near residential area.
- Health & Safety, vertical speeding either work truck, mules, onsite & off site.

LATE ENTRY 1805 EPA OSC informed TAS Jason Wright micro-blows will not be approved by EPA to be applied to the banks of the creek. TAS J Wright said he would pass on the information to RP.

2000 START will continue documentation and uploading to Response Manager.

Photo log: Photographer tg witness dm

| #   | date     | time | location | discription   |
|-----|----------|------|----------|---|
| 100 | 03/14/13 | 1339 | SW       | RP crew blowing oil toward roller skimmer at upstream |
| 101 | 03/14/13 | 1343 | NE       | area of WIER2<br>WDM-CU for T6                        |

03 14.13

tg 2/03/13 0802-042-13805

Photo log Continued

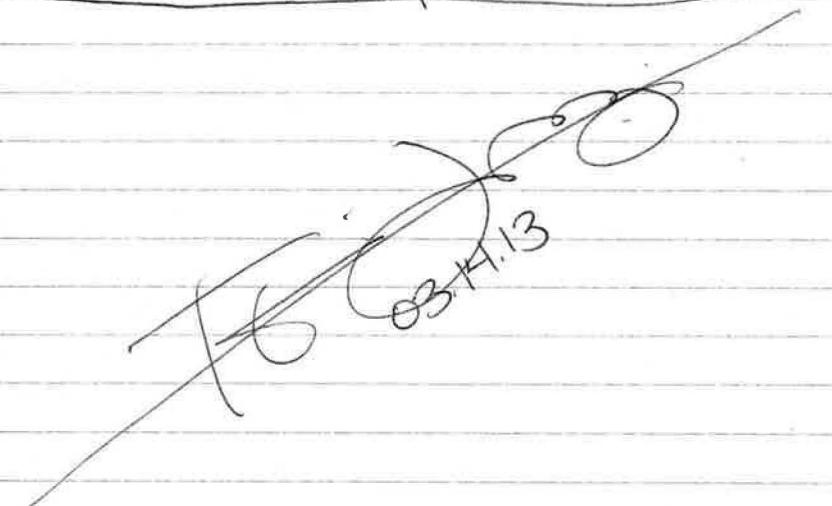
| #   | date     | time | location | discription  |
|-----|----------|------|----------|--|
| 102 | 03/14/13 | 1354 | SW       | up from WIER2 with (2) skimmers, roller & floater                                    |
| 103 | 03/14/13 | 1403 | SE       | Completed road of road mats to WIER 2  |
| 104 | 03/14/13 | 1403 | SW       | Completed road to WIER 2   |
| 105 | 03/14/13 | 1403 | NNW      | Completed road to WIER 2   |
| 106 | 03/14/13 | 1413 | NNW      | Completed Road to WIER 2   |
| 107 | 03/14/13 | 1433 | W        | WIER 1 location - RP crew blowing oil to roller skimmer.                             |
| 108 | 03/14/13 | 1518 | WSW      | RP contractor ACME skimming at Large Culvert w/ roller skim.                         |
| 109 | 03/14/13 | 1637 | SE       | Rope mop skimmer & roller skimming at downstream end of Beaver Dam                   |
| 110 | 03/14/13 | 1644 | SW       | Beaver Dam area day 2.   |
| 111 | 03/14/13 | 1649 | NW       | RP contractor ACME waiting for water to wash banks.                                  |
| 112 | 03/14/13 | 1713 | E        | RP crew repairing berm after installing new discharge pipe for decontamination pond. |

4 03.14.13

tg 2/10/13 0002 042-13 005

Photo Log Continued

| photo # | date     | time | direction | description   | to |
|---------|----------|------|-----------|---|----|
| 113     | 03/14/13 | 1735 | SE        | New release valves for<br>release pipe at detention<br>pond.                    | 20 |
| 114     | 03/14/13 | 1736 | NW        | Old release valve for<br>release pipe at detention<br>pond                      | 20 |
| 115     | 03/14/13 | 1736 | S         | Previous release pipe<br>from pond.   | 20 |
| 116     | 03/14/13 | 1738 | SW        | RP crew using track<br>hoe to remove large<br>over growth at detention<br>pond. | 20 |



03.15.13

tg 2/10/13 0002 042-13 005

0755 START departs to Lion Oil — 20  
Magnolia Spill. See Health & Safety pg 23.

Weather: Currently 47°F winds SW mph.  
Today mostly clear Hi 78°F SW winds  
15-20 mph. Wind Advisory today. —

Physical Hazard: Driving - speed, obstacles  
2 people. Domestic animals. Hydrant  
sunblock. Over head hazards. DMS 2013 MELT  
0805 START arrived at Command  
Center Staging. —

0812 OPS meeting —  
In Attending: LOTT, Code 3, EPA, ADEQ,  
TAS, J Kristie —

- RP - WIER 2 move skimmers to —  
new locations - made progress  
Move boom further away from —  
WIER 2. Needing 3-4 crews to —  
assist with contaminated debris. —  
• Move double buggy from WIER 2 to —  
Beaver Dam. —

J Kristie (20) crew members new crew  
members (?) —

- Total personnel onsite 90-100  
- Code 3 to walk entire creek from —  
top to bottom. —  
DMS 2013 for TS —

5

6 03.15.13

- tg 210000Z 0002-042-13-005  
- Ice for crews coming today — 26  
- CTEH coming to assist work hard & hand w/ Logistics.  
- TMS H2S Gaylen Smith is onsite Primary decommissioning area —  
Beaver Barn. Working on ICS.  
Add more boom down at WIER 1 & assist with debris clean up.  
Continue washing creek bank upstream down towards Beaver Dam - ACME, OMI - Beaver, Raile Culvert. Code-3 walking creek

Weather

LATE ENTRY 0808 RP provided 1003 tank spill recovery inventory:

| date     | gauge | total oil | water | station recovery total | creek recovery total | area total |
|----------|-------|-----------|-------|------------------------|----------------------|------------|
| 03.13.13 | 13.4  | 11385     | 4928  | 6457                   | 2870                 | 1330       |
| 03.14.13 | 12.7  | 10790     | 5013  | 5777                   | 2890                 | 1415       |
| 03.15.13 | 12.8  | 10875     | 5268  | 5607                   | 2890                 | 1670       |

LOTT is off loading water from 1003 tank & hauling to refinery.

0851 START depart site to conduct air monitoring & observe work areas

0940 START arrives at CR 34 Culvert. Calibration of MultiRAE RFW 23767 Bump D.M. 18 for 76

7 03.15.13

tg 210000Z 0002-042-13-005

O2 - 18.1%

CO - 25 ppm

LEL - 99%

H2S - 34.2 ppm

C4H8 - 98 ppm

1020 EPA OSC M Hayes arrives at CR 34 Culvert. EPA & START discuss current operations.

1050 START & EPA OSC depart.

1100 START arrived at WIER 2. EPA OSC on site. START spoke with OMI Dan (Foreman) will be working with RP

bring a crew to remove contaminated debris from WIER 2 upstream 200-300 yds. HAE to vacuuming, skimming & sucking. Good progress with oil skimming over night. Grease Moving hard boom upstream once oil near WIER is clean. Then placing soft boom every 50'. Late 30s to

1137 EPA OSC & START depart WIER 2 for WIER 1.

1150 START arrives onsite. RP George guiding CTEH the oil spill area and work sites.

D.M. 18 for 76

8 03.15.13

to 2/Wester 0002-042-13-005

1211 Code 3 and EPA OSC arrive at WIER 1.

1215 EPA OSC & START depart WIER 1 to LOTT office.

1221 EPA OSC & START arrived at LOTT office.

1230 EPA OSC & START depart site for lunch.

**LATE ENTRY** 142 START ~~was~~ stops store ~~down~~ on the road with TAS Jason and discuss the two WIERs and how both WIERs need to be informed prior to next rain event this Sunday (03.17.13).

1330 START and EPA OSC return to site.

1335 START departs site for field supplies

1425 START arrives on site. Heading to Beaver Dam area.

1438 START arrives at Command Center.

1450 START accesses the upstream area of zone 1 & Beaver Dam area.

1547 Departs START departed zone to cross over at ~~sorta~~ new small culvert to go to southside of Beaver dam.  
P.M. CT for T6

03.15.13

to 2/Wester 0002-042-13-005

1550 Depart zone 1 for right-of-way over zone 2.

1604 Arrived at right-of-way zone 2.

1606 Current temperature 77°F  
Winds SW 12 mph.

1607 START departs to Big House Road zone 2.

1615 START arrived at Big House Road (1) 30 bbl VAC (2) with (1) roller skimmer. OMI operator said they have off loaded (2) today. OMI crew was out at same location yesterday (03.14.13) came out with 1/4 tank on VAC & off loaded once.

1621 START departs for Big Culvert  
1632 START arrived at Big Culvert OMI operations said they off loaded (1) today at lunch.

1645 START departs to Command Center.

1652 START arrived at Command Center for OPS meeting.  
1700 OPS meeting.  
08:00 CT for T6

10 03.15.13

- tg 2/weston 0002-042-13 205  
In Attendance: LOTI, TAS, CODE-3, CTEH,  
EPA, J Kristie.
- Health & Safety: Heat - take breaks, PE 10 ft from bank. No near misses or NOIs. Safety still FIRST! Weather becomes warmer - heat stress — 26
  - WIER 2 (2) skimmer, most debris picked up. No skimming tonight. Tomorrow WIER will be reinforced with clay dirt reinforce both front & back. WIER 1 reinforced making it higher & adding more soil. 26 Several skirt booms being laid down downstream of WIER 2 —
  - OMI/TAS new area <sup>part of</sup> zone 2 & 3 —
  - J Kristie - working good
  - TAS - road signs at locations for monitor - emergency hours. Two stop works near WIER 2
    - 1 - 1.4 ppm Benzene levels PE2 exceeded once at 1400 & 1600 near the bend just upstream from WIER
    - RP George introduces James McCormack with CTEH (Center for Toxicology & Environmental Health, LLC. Focus on clean up of release site at LOTI. DRAFT

03.15.13

11

- tg 2/weston 0002-042-13 205  
Lion Oil focus is "not to get pass WIER 2 with upcoming rain event. The "group" discusses plan to implement plan on 03.15.13 to 03.16.13 to prior to potential significant rain. —

1855 START depart site to hotel.  
1910 START arrives at hotel unloads equipment. —

LATE ENTRY 1956 Readings on MultRAE VLS<sub>16</sub>, CO & LEL continuously read 0.0 & O<sub>2</sub> 20.9 throughout the day.

1925 START will continue documentation and uploading to Response Manager.

Photo log: Photographer tg witness dm

| photo | date     | time  | direction | description  |
|-------|----------|-------|-----------|--|
| 117   | 03/15/13 | 11:12 | WSW       | RP Contractors blowing oil to skimmer up stream  |
|       |          |       |           | tg of WIER 2   |
| 118   | 03/15/13 | 11:22 | NW        | Condition of Little Cornie Bayou between hard boom upstream & WIER 2 after night of skimming |
| 119   | 03/15/13 | 11:23 | SW        | Condition of Little Cornie Bayou between hard boom upstream & WIER 2.                        |

DRAFT for tg

12 03.15.13

tg 2/Weston 0002 042-13-005

Photolog Continued

| photo # | date   | time | direction | description  |
|---------|--------|------|-----------|--|
| 120     | 031513 | 1124 | NE        | Condition of upstream LBC just upstream of WIER 2. Containment debris clogging skimmers. |
| 121     | 031513 | 1124 | S         | Containment debris clogging in head boom.  |
| 122     | 031513 | 1127 | SE        | WIER 2 location.   |
| 123     | 031513 | 1205 | SW        | WIER 1 location.   |
| 124     | 031513 | 1502 | S         | RP contractor washing creek bank downstream of release site.                             |
| 125     | 031513 | 1503 | SW        | RP Contractor washing creek bank downstream of release site.                             |
| 126     | 031513 | 1520 | SW        | Beaver Dam area.   |
| 127     | 031513 | 1521 | SE        | Beaver Dam area.   |
| 128     | 031513 | 1602 | E         | Right of Way, RP Contractor collecting debris & pushing oil to roller skimmer.           |
| 129     | 031513 | 1602 | W         | Right of Way area.   |
| 130     | 031513 | 1614 | NW        | VAC truck using roller skimmer at Big House Road.  |
| 131     | 031513 | 1614 | N         | Big House Road location  |
| 132     | 031513 | 1619 | SW        | Big House Road location.   |
| 133     | 031513 | 1634 | WSW       | Big Culvert location.  |

DRAFT for TG

0316.13

tg 2/Weston 0002 042-13-005

0740 START DM McCarty &amp; T Gandy depart to Lion Oil Magnolia Spill site. Health

& Safety see page 2-3 in logbook 1.  
Weather: Currently 56°F winds SW <sup>bmp</sup> Today: Partly cloudy hi 79°F SW winds 15-20 mph w/gusts near 30 mph.PPE? Level D Hard hat, steel toe, safety glasses  
~~High Physical Hazards~~: Driving mule - seat belt. ~~Don't Get Dressed~~ ~~Tori Gandy To Dos~~ 20

0757 START arrives at Command Center / Staging.

0805 RP Contractor THS handed out vehicle identifiers to be hung on mirror for entry on to site.

0811 OPS meeting.

In Attendance: LOTT, J Kristie, CODE-3 TAS, EPA contractor, EPA OSC not in attendance. Focus: Zone 3 with up coming weather.

Priority: • Reinforcing WIER 2, replacing boom (all), adding skimmer, removing debris. • Zone 3 stabilized • Zone 2 added another skim site, blowing oil, picking up debris. • Washing Creek with floating pumps DRAFT for TG

13.

14 03.16.13

tg 2/0855 0002 #12-13005

- J Kristie crew staying in Zone 1 - Blower
- Pulled some crew off zone 1 to zone 3.
- Putting down boom throughout to catch sheen.
- Prepare for 24hr operational period if rain occurs. Needing lighting.
- Addressing piled contaminated soil at SPILL site.
- Working to contain excavated soil with berm at spill site.
- Extra VAC staged at retention during rain event to pump if need.

03.15.13  
0855 START tasked with oversight of operations of spill recovery. Report to EPA OSC's M Hayes any inconsistencies, keep out on booms, walk LCB downstream of WIER. EPA OSC will return to site Wednesday (03.20.13).

0900 START depart Common & Central for CR 34 culvert.

0913 START arrives at CR 34 culvert.  
0915 Calibration of MultRAE RFW 03767  
see page 15. Little odor of oil smell noticeable.  
DGM IT for Tg

03.16.13

tg 2/0855 0002 #12-13005

15

Fresh air: Pass on all sensors

4 Gas ( $\text{CO}, \text{CH}_4, \text{H}_2\text{S}, \text{O}_2$ ) Air Gas Lot # LHM-405-3 - Cal Gas

Exobutylene ( $\text{C}_4\text{H}_8$ ) - 100 ppm Lot # BAN-248-100-22 - Cal Gas

O<sub>2</sub>: 18% - Pass @ 18.1%

CO: 50 ppm - Pass @ 50 ppm

LEL: 50%. LEL (2.5%  $\text{CH}_4$ ) - Pass Cal

H<sub>2</sub>S: 25 ppm - Pass @ 25.7 ppm

VOCs ( $\text{C}_4\text{H}_8$ ) 100 ppm - Pass @ 100.3 ppm

0947 START departs to LOTT site.

0956 START arrives at LOTT site.

LOTT site has crossed & staged Contaminated Soil on visqueen & have covered (2) piles. Focus is on reinforcing the back side of berm at retention pond. (1) VAC truck coming to HFC to skim off remaining oil & water in pond.

1024 START depart to WIER 2 location

1037 START arrived at WIER 2. ACME crew upstream skimming oil & pushing oil to skimmer. Other ACME crew just upstream of WIER washing berms & bagging contaminated debris.

DGM IT for Tg

16 03 16.13

tg 2 Westcoast 42-13-05

R Track hoe operator adding more soil to WIER 2. Cement bags line the upstream side of WIER. Soil has been added to downstream side of WIER. (4) hard booms placed downstream of WIER ~ 50 yds apart. Only (1) absorbant boom noticed. Very small patches of oil downstream at each boom is noticeable. CT EH arrived at site ~ 1105.

1146 START depart WIER 2 to WIER 1  
1151 START arrives at WIER 2. There is a lot of concentrated debris in the water to skim. ACME crew in water removing debris just up stream of WIER. Bank washing crew downstream of WIER.  
RP reps on site.

1222 CT EH crew (2) arrives at WIER 2  
1227 START departs to find new skinning location ~~Yellow Point~~ Road. Could not find it.

1240 START departs for lunch. Get field water slice.

1413 START arrives at Command Center. DMC for T6

03.16.13

tg 2 Westcoast 42-13-05

1425 Depart down to Beaver Dam Crews are continuing washing banks, racking, & some skinning.  
1453 START depart to locate new skinning location.

1525 START arrived at the new location ~~Yellow Point~~ <sup>Tree</sup> Road. RP crew TDS skinning with blowers up stream.

1533 START depart for WIER 1

1543 START arrives at WIER 1 location. RP crew reinforcing WIER. Other tasks or hold until crew is done

1605 Depart to WIER 2

1612 START arrived at WIER 2. Skimming screening, & racking of upstream areas have made progress with the free standing oil. WIER 2 reinforcement is completed and ready for rain event.

1645 START depart to command center.

1657 START arrived at Command Center. Readings on multiRAE VOCs H<sub>2</sub>S CO & LEL continuously read 0.0 & O<sub>2</sub> 20.9 throughout the day.  
DMS U for T6

17

18 03.16.13

- to 2/WEST 0002-012-13005 D05  
 1705 OPS meeting: LOTT, MAC, TAS, CODE, JC, ACME  
Hes Heat, hazards, changes of chain  
EPA Con.  
 command for stops work, hearing protection, speed, ppe at creek.  
 Hot incidents, small puncture.  
 - Zone 1: Washing banks  
 - Zone 2: (3) skimming locations reinforced WIER 1  
 - Zone 3: Reinforced WIER 2, sand bagging, skimming, debris clearing  
 -(2) skimmers at Zone 2 - WIER 1  
 - Code-3: personnel air monitors  
 - (5) personnel working in same area wearing the monitors.  
 - zone-3: (6) hard upstream (6) down

\*Tomorrow 03.17.13:

- Zone 3: ACME moving from zone 3 to zone 2 to push oil to skimming  
 - finishing WIER 1 reinforcement  
 - May move more personnel to Beaver dam.

Site personnel badges are being produced to identify personnel on site and used for check in and out.

1730 START get site badges  
 W/ M/LT for T6

03.16.13

19

- to Guest 2002-012-13005  
 1758 START departs ss to hotel.  
 1800 START arrives at hotel unload equipment and will continue documentation. OSC Mark Hayes called START. DMcCarty updated him with days updates and briefed him on OPS meeting, etc. OSC MHayes requested to keep an eye on downstream areas from WIER 2 Verify game plan for remediation of Beaver Dam. He asked to coordinate LION IC (Incident Commander) on receiving daily recovered totals. START DMcCarty requested <sup>daily</sup> summary of air monitoring activities.

| date | time     | activity | description   |
|------|----------|----------|---|
| 134  | 03.16.13 | 1001     | SE Initial release site - Lott.                                       |
| 135  | 03.16.13 | 1002     | NE Storage deck soil covered with visqueen.                           |
| 137  | 03.16.13 | 1006     | NW Detention pond.  |
| 138  | 03.16.13 | 1056     | SW Initial release site to creek.                                     |
| 139  | 03.16.13 | 1056     | SW Boomed area upstream WIER 2  |
| 140  | 03.16.13 | 1104     | SW Boomed area upstream WIER 2 Reinforcing of WIER 2<br>Done 4 for T6 |

20 03.16.13

tg 2/Westra-0002-042-13-005

Photo Log Continued

| photo # | date     | time | direction | description  |
|---------|----------|------|-----------|--|
| 141     | 03/16/13 | 1121 | E         | Reinforcing WIER2.                                     |
| 142     | 03/16/13 | 1204 | ESE       | Banking washing downstream<br>of WIER1                 |
| 143     | 03/16/13 | 1205 | SE        | Banking washing downstream<br>of WIER1                 |
| 144     | 03/16/13 | 1445 | SE        | Beaver Dam area.                                       |
| 145     | 03/16/13 | 1445 | SW        | Beaver Dam area.                                       |
| 146     | 03/16/13 | 1447 | SE        | Downstream end of<br>Beaver Dam area                   |
| 147     | 03/16/13 | 1528 | SF        | New skinning area<br>Yellow Tree Road.                 |
| 148     | 03/16/13 | 1528 | SW        | New skinning area<br>Yellow Tree Road.                 |
| 149     | 03/16/13 | 1555 | NW        | Reinforcing WIER1                                      |
| 150     | 03/16/13 | 1630 | W         | Pushing oil downstream<br>to boom upstream of<br>WIER2 |
| 151     | 03/16/13 | 1631 | SW        | Boom area upstream WIER2                               |
| 152     | 03/16/13 | 1632 | S         | Completed reinforced<br>WIER2                          |
| 153     | 03/16/13 | 1632 | SW        | Completed reinforced<br>WIER2 skinning in background   |
| 154     | 03/16/13 | 1632 | ESE       | Completed reinforced WIER2.                            |

DRI put it for TG

03.17.13

tg 2/Westra-0002-042-13-005

0740 START McCarty and TGamey  
depart to Lion Oil Magnolia Spill.Health and Safety see pages 2-3 logbook  
Weather: Currently 59°F winds 5 mph.  
Today: Mostly cloudy with chances of  
showers & thunderstorms 40%. Hi 76°F  
5 winds 10-15 mph.Physical: Parking back in or aisle to pull  
through for emergency act away. Rain  
slippery surfaces. ~~DMC 100 DMC 100~~  
0800 START arrive at Command Center.

0811 (OPS meeting) / Manu's Meeting

- Health & Safety: Muster pointer  
get them set up. PPE, Speed, —  
night to stop work. Route to  
hospital & emergency #s. —- WIER 2 et-working cleaning, skinning,  
washing, lights to be brought  
tonight.- TAG - Putting together planning  
meeting at 1400 everything dry.  
Stag blowers from top zone 2-3.  
Replacing sorbents when needed.  
Staging areas throughout.  
Air monitoring still going.  
DRM kit for T6

21

22 03.17.13

tg 2/Western-0002-42-13-005

- Zone 1: 1A, 1B - JKustie blowing & pushing oil down stream.
- LOTT, JK, OMI in zone 2
- CODE-3 & Mac clearing debris Zone 3A
- ACME wash bank between WIER 1 & 2.
- At current over 100 personnel on site.

0900 START departs to CR34. START calls to get info on AmeriAlert Messaging Systems for operations. Check in on site.

0924 START arrives at CR34. Set up to begin calibration of MultiRAE for monitoring

1000 Calibration of multiRAE RFW 23747

Fresh air cal - Pass on all Sensors

4 Gas ( $\text{CO}$ ,  $\text{CH}_4$ ,  $\text{H}_2\text{S}$ ,  $\text{O}_2$ )! AirGas Lot #

LAM - 40e-3

Isooctylene (Cutts): 100 ppm Air Gas Lot #

BAN - 248-100-22-Cal Gas

$\text{O}_2$  18% - 18

$\text{CO}$  50 ppm - 51 ppm pass

LEL 50% LEL - 49% pass

$\text{H}_2\text{S}$  25 ppm - 25.3 ppm pass

Isooctylene 100 ppm - 100.1 ppm pass

1014 START departs to WIER 2 location

1024 START arrives at WIER 2

0314 LT for T6

03.17.13

tg 2/Western-0002-42-13-005

Crew are washing banks & moving free oil upstream to skimmers. Concentrated debris removal is continuing. (#) set of 3 hard boom placed downstream of WIER 2 with soft boom laid in front. Oil sheen is visible down at third boom.

1114 START departs to WIER 1

1125 Arrived at WIER 1 location. (#) skimmers, WIER crew (LOTT) on lunch break. After lunch move (1) roller skimmer to between hard booms use sorbent pads & blow axial to skimmer. Clean out decor. debris around the bank.

1136 START noticed oil in secondary containment of the frac tank. Sorbent pads have been laid down.

1159 START departs to Yellow Tree Road

1203 Arrived at Yellow Tree Road

Crews on land (1) roller skimmer (1)

VAC truck at site. Not enough oil for

1220 tg for skimmer to pick up.

1220 START departs location.

1230-1st for T6

24 03.17.13

- tg 210300Z 03-03-13 05  
1230 START arrives at LOTT site release. START D McCarty talks with IC George (LOTT). START T Goomey observe LOTT crew at detention pond removing debris soil out of pond. Crew is placing it on clean soil.  
1255 START departs LOTT site for lunch.  
1420 START arrives at Command Center. Got gas for field truck while at lunch.  
1430 START observes activities in Zone 1: Beaver Dam, Big House Road, Big Culvert.  
1519 START arrived at Big Culvert. →  
End of Zone 1. (1) VAC (1) skimmer (3) crew members  
1535 START departs to Yellow Tree Road. Begins zone 2.  
1538 START arrived at Yellow Tree Road. (1) VAC truck, (1) skimmer, (3) crew members. Continuous ribbons of oil coming down stream most of the day.  
1545 START departs to WIER 1. End of Zone 2.  
1600 START arrives at WIER 1. (1) VAC truck, (2) skimmers (in use)  
DRAFT for TG

03.17.13

25

- tg 210300Z 03-03-13 05  
(5-7) crew members. Progress made getting free oil skinned from the upstream side of WIER 1  
1620 START departs to Zone 3 and WIER 2. Fresh air blowers at WIER 1  
1624 START arrived at WIER 2. →  
free oil has been pushed back up stream ~300 yds. Remaining free oil is continuously being skimmed. Fresh air blowers on site at bank in work zones.  
1635 START departs to command area.  
1650 START arrives at command area.  
1707 Command Meeting. LOTT COO 3, TAS, JK, ACME, CIEH, TRG  
- Health & Safety: Speed, PPE, guests in the community, air horns have been placed in strategic areas.  
- Zone 1: washing at Beaver Dam IC: a lot of oil trapped behind debris forming debris and oil. →  
- Zone 2: Getting paths in to remove debris not as much debris as in Zone 1 & 3. →  
DRAFT for TG

26 03.17.13

to 21 West 0002-2412-13-005

-110 personnel onsite.

- Zone 3: All boom secured, a slug of oil coming down but will be caught.  
~300 yds upstream of WEIR 2.

Initial objective pick up all free oil.  
Final Objective NO OBSERVABLE OIL

tomorrow.

Zone 3 - water control, debris,

(2) personnel will be moved to zone 2.

Zone 2 - blowing, bagging, washing additional personnel.

Zone 1 - need an additional water hose.

For all zones skimmers will be pulled tonight, booms tide down

(2) crews members onsite will call if rain event occurs a crew will be ready to mobilize.

-TRG working on resources

1732 START checks out and departs site stop at initial release site &amp; detention pond on way to hotel.

1752 START arrives at hotel unload truck.

Q8 MCL for T6

03.17.13

to 21 West 0002-2412-13-005

LATE ENTRY 1650 Readings on multIRAE VOCs, H<sub>2</sub>S, CO & LEL continuously read 0.0. & O<sub>2</sub> 20.9 throughout the day.

LATE ENTRY 0815 RP provided 1003 tank

| date     | gauge | total | oil  | water | Station  | Greek |
|----------|-------|-------|------|-------|----------|-------|
|          |       |       |      |       | Recovery | Total |
| 03/16/13 | 13.3  | 11300 | 5088 | 6202  | 2890     | 1500  |
| 03/17/13 | 13.6  | 11555 | 5183 | 6372  | 2905     | 1570  |

\*Oil volumes are gross.. not corrected for temp, gravity, or BSzw (Basic Sediment & Water)

1810 EPA OSC always called START DMCarty to discuss today site activities.

START is to continue the round at previous and any new locations.

1830 START will continue documentation.

Photolog + photogallery it's witness dm

| photo # | date     | time | direction | description  |
|---------|----------|------|-----------|--|
| 155     | 03/17/13 | 1050 | SW        | RP contractors blowing oil toward sock boom. Upstream from WEIR 2. |
| 156     | 03/17/13 | 1051 | E         | WEIR 2 location in morning   |
| 157     | 03/17/13 | 1051 | SW        | WEIR 2 location  |
| 158     | 03/17/13 | 1056 | NW        | Boom downstream from WEIR 2.                                       |

Q8 MCL for T6

27

28 03.17.13

tg 2/West b. 0002 03/12-13 2005

Photo log continued

| photo | date     | time | direction | description  |
|-------|----------|------|-----------|--|
| 159   | 03/17/13 | 1132 | W         | WIER 1 location in morning.                                    |
| 160   | 03/17/13 | 1210 | S         | Yellow Tree Road location                                      |
| 161   | 03/17/13 | 1211 | SW        | Yellow Tree Road location                                      |
| 162   | 03/17/13 | 1426 | SE        | Right of way location  |
| 163   | 03/17/13 | 1532 | W         | Barge Culvert location.  |
| 164   | 03/17/13 | 1604 | W         | WIER 1 location in afternoon<br>boom area upstream from WIER 2 |
| 165   | 03/17/13 | 1625 | SW        | Yellow Tree Road location                                      |
| 166   | 03/17/13 | 1625 | SE        | Boom area upstream<br>from WIER 2.                             |
| 167   | 03/17/13 | 1628 | NW        | Boom area upstream<br>from WIER 2.                             |
| 168   | 03/17/13 | 1628 | SW        | Boom area upstream<br>from WIER 2.                             |
| 169   | 03/17/13 | 1429 | ENE       | WIER 2 location in afternoon                                   |
| 170   | 03/17/13 | 1429 | SW        | WIER 2 location  |
| 171   | 03/17/13 | 1736 | S         | Retention pond near initial<br>release site                    |

03.17.13

03.18.13

tg 2/West b. 0002 03/12-13 2005

0740 START McCarthy & T Gamey depart  
to Lion Oil Magnolia Spill site.Health & Safety: See pages 2-3 in logbookWeather: Currently 65°F S winds 8 mph.  
Today: Mostly cloudy w/ 30% chance  
of showers & thunderstorms. Hi 73°F  
SW winds 10 mph becoming N in  
afternoon.Physical Hazard: No texting and driving  
or talking on cell.0755 START arrives on site heads to  
Command Center

0811 Command Meeting

- Focus to prepare to pick up all  
free oil.- Safety: No texting / talking while  
driving. Badging in/out. Caution  
with persons & vehicles. Muster  
points. No scan no pay.- TADS - Yesterday focus pick up  
all free oil. None 3 another  
staging area. None 3 washing,  
cleaning. None 2 pumping, skimming  
with focus on B. None 1 washing  
around Beaver Pond area.

DMC US for T6

29

30 03.18.13

tg 2/weston 0002 042-13005  
Accommodate to the plan when  
needed. Jones have identified  
leaders.

- Organizing the Org chart
- Documentation for all site activities.
- Delivered 87 bbl yesterday
- Weather - rain clouds maybe moving in today ~ noon.
- Trailer coming in at 0800 at LOTT site once there the meetings will be held there.

0840 START depart to CR 34 and begin air monitoring around perimeter of spill area.

0900 START arrived at CR 34 Culvert. fresh air calibration and bump test on MultRAE RFW 03767.

0910 Fresh air calibration & Bump Test 4 Gas (CO, CH<sub>4</sub>, H<sub>2</sub>S, O<sub>2</sub>) Air Gas Lot# LHM-406-3.

Cal Gas / Isobutylene (C<sub>4</sub>H<sub>8</sub>) 100ppm Air Gas Lot# BAN-248-100-23

O<sub>2</sub> 18%: 18.2%

CO 50ppm: 48 ppm

DMCIT for T6

03.18.13

tg 2/weston 0002 042-13005  
LEL 50%. LEL: 217% LEL  
H<sub>2</sub>S 25ppm: 24.6 ppm  
Isobutylene 100ppm: 98.0 ppm

0913 EPA OSC M Hayes called START D McCarty getting verification on oil recovered numbers. START D McCarty provided update on 0800 Briefing meeting. Amulsified oil at boom.

0938 START departs to WIER 2

0950 START arrives at WIER 2. Crews continue washing, moving free oil to skimmers. Set of booms down stream, booms need to be repositioned amulsified oil is collecting at each boom. Sheen is apparent (1) water pumping

1038 START departs to Yellow Tree Road

While on site at WIER 2 START notice VAC trucks off loading from side fence tank to VAC truck. At least 3 separate times.

1045 START arrives at WIER 1 area.  
(1) Skimming, (1) VAC truck, & (1) fence tank (1) water pump on site not running crew continue to skim & blow water. Soot pads & soft boom need replacing DMCIT for T6

31

32 03.18.13

tg 2105 START departs WIER 1 to Yellow Tree Road.  
1105 START arrives at Yellow Tree Road. Crew said not much oil this morning. They went upstream & found a pocket. They released oil to come down to boom area. Begins raining.  
1120 START departs site to large Culvert.  
1200 START arrives at large Culvert. not enough oil if LCB took it.  
1205 START Departs site to LOTT Site.  
1228 Arrived at LOTT site. START spoke with IC George Garten (LOTT) about the emulsified oil at CR 34 and set of boom downstream of WIER 2.  
1245 START departs site for lunch  
Incident team departs to CR 34.  
1258 IC George Garten called START DMcCarthy to verify small amounts of emulsified oil at CR 34 culverts.  
1345 START returns to site head to CR 34 culvert.  
1355 START arrives at CR 34 culvert to observe any changes with booms. (1) soft boom was placed just downstream of the lot.

0318.13

tg 2105 START departs WIER 1 to Yellow Tree Road.  
of hard boom on northside of culvert and (1) soft boom was placed downstream of southside of culvert ~50ft.  
1407 START departs to WIER 2  
1417 START arrives at WIER 2 to observe boom situation down stream. No change. One crew pushing oil slug downstream to boom area ~300 yds upstream from WIER 2  
1448 START departs to WIER 1  
1452 START arrives at WIER 1. Crew has stopped work until gas for generator. Once generator for fresh air blowers go again they will continue blowing free oil to skimmer.  
1509 START departs to Yellow Tree Road.  
1511 START arrives at Yellow Tree Road. (2) man crew working upstream washing & pushing oil to the yellow tree road. The (2) crew members also are managing the skimmer.  
1531 START departs for Command Center/staging area.  
DRAFTED for TB

33

34 03.18.13

tg 210800Z 031813Z  
1538 START arrives at Command/Staging area to observe Beaver Creek area.  
JKristie crew racking Beaver Pond area (8) crew members. O'Brien & Gere personnel RP has contacted to assist RP with spill. O&G show START historical oil spill that was discovered other day during the access operations to access to Beaver Dam. The historical spill is located south of Beaver Dam near the edge of the pine tree grove.  
1655 START return to Command/Staging area.

1705 Command meeting - LOTT, TAS, TRP, JKristie, CTEH, O&G, OMI, EPA contractor - Safety - (0) incidents, (1) animal fatality - O's in <sup>Area</sup> 3 picking up & washing downstream Area 2 recovery clearing debris. Skimming in couple of areas. Skimming in IC. Discuss in planning meeting of relocating bower. Finish washing Beaver Dam, move to flushing area. Done? finish DMR for 76

03.18.13

35

tg 210800Z 031813Z  
road between 2A & 2B. Done 3 waiting to beam. Relocate equipment from Zone 3 to Zone 2. Moving scanning in/out to front gate tonight for tomorrow 1730 START McLarty discuss w/ IC Garter about distance between beam past WIER 2 to CR 34 will be 150yds to each one.

LATE ENTRY 1657 Readings on multRAE VOCs, H<sub>2</sub>S, CO & CEL continuously read 00 & O<sub>2</sub> 20.9 throughout the day.

1830 START departs Lion Oil Magnolia Spill site.

1840 START arrives at hotel unload equip and will continue documentation and uploading to Response Manager.

Photolog: photographer to witness dm photo date time location description

172 031813 1012 E Water from upstream of WIER 2 being pumped to lower water level for washing.

173 031813 1033 SW Set of booms downstream of WIER 2 (Set 3)  
DMC for 76

36 03.18.13

03.18.13

tag 2/West 0002 042-1300S

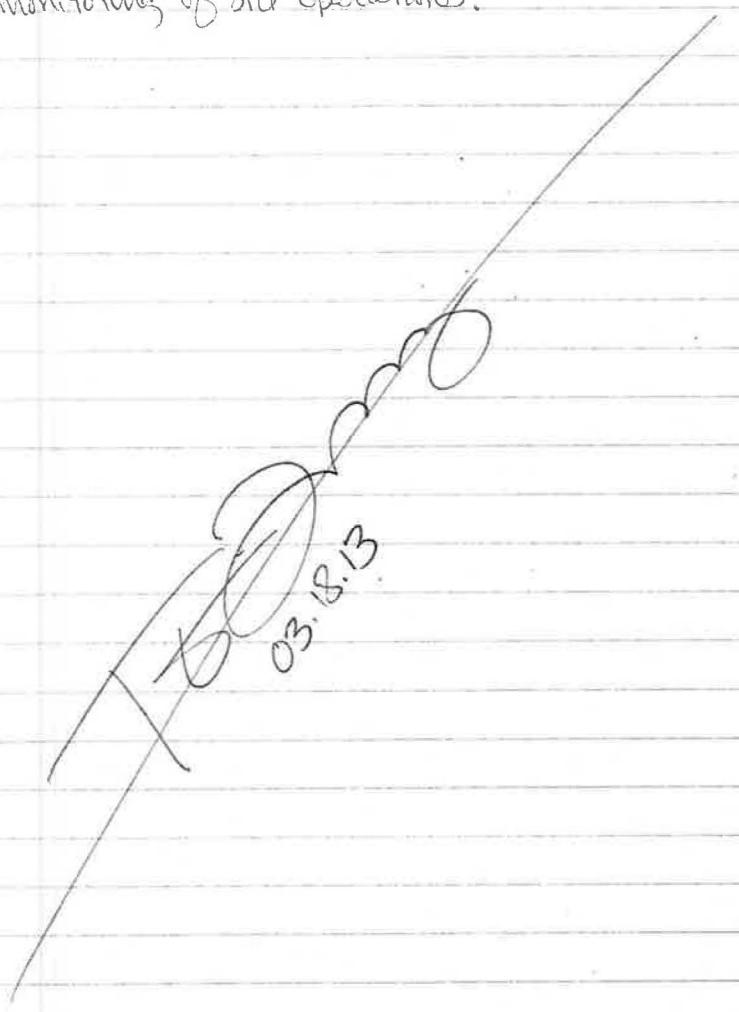
Photolog Continued

| photo | date     | time  | direction | description   |
|-------|----------|-------|-----------|---|
| 174   | 03.18.13 | 10:24 | SW        | Set of booms downstream<br>of WIER 2 (set 2)  |
| 175   | 03.18.13 | 10:25 | NW        | Set of booms downstream.<br>of WIER 2 (set 1)   |
| 176   | 03.18.13 | 11:18 | S         | Yellow Tree Road location.<br>after free oil slug brought<br>down from upstream.                |
| 177   | 03.18.13 | 11:18 | SW        | Yellow Tree Road location<br>after free oil slug<br>brought down from upstream                  |
| 178   | 03.18.13 | 13:55 | W         | CR 34 culvert: more soft<br>boom added to location<br>to catch emulsified oil<br>on north side. |
| 179   | 03.18.13 | 13:55 | SW        | CR 34 culvert: more soft<br>boom added to location<br>to catch emulsified oil<br>on south side. |
| 180   | 03.18.13 | 15:23 | W         | Yellow Tree Road crews washing<br>banks & releasing oil to<br>skimmer at YTR.                   |
| 181   | 03.18.13 | 16:31 | SW        | Oil patches within historical<br>oil spill south of Beaver Den                                  |
| 182   | 03.18.13 | 16:33 | NNW       | START contractor taking GPS car of <sup>historic</sup> spill                                    |

tag 2/West 0002 042-1300S

LATE ENTRY 1356 EPA OSC M Hayes called  
START directly for daily update of the  
days events. He tasked START to continue  
daily monitoring of site operations.

37



38 03.19.12

tg 2/West 2002-2042-13005

0740 START D McCarty and T Gomez depart to Lion Oil Magnolia Spill. Health & Safety see pages 2-3 logbook.

Weather: Currently - 39°F Wind NNE 3 mph Today - Mostly Clear. Hi 67°F E winds 5-10

Physical Hazards: When driving into — #  
staging areas, trails, or sites watch  
for crew members & other vehicles.

Signatures: ~~D. McCarty D. Gomez~~ — 26

0759 START arrives at Lion Oil head to Command / Staging area

0810 RP provided 1003 tank recovery inventory

| date     | gauge  | total oil | water | station | creek | recovery total | recovery total |
|----------|--------|-----------|-------|---------|-------|----------------|----------------|
| 03/18/13 | 1245   | 10578     | 5268  | 4310    | 9905  | 1655           |                |
| 03/19/13 | 11.605 | 9877      | 5289  | 4588    | 2905  | 1676           |                |

0815 Parent company Deltec Mike — 26  
Inman VP Environmental Regulatory Affairs is on site. — 25

0824 Morning briefing - Deltec, LOTT, TAS, EPA Con.

- April 1 - Continue washing, flush the fleet. Allocate additional personnel & assets from April 3 to April 1 & to accomplish tasks. — 25

Bring water tankers closer to site

- April 2 - tree cutting stop until  
D. Theft for T6 — 25

03.19.12

tg 2/West 2002-2042-13005

Authorization is approved. Continue skimming. Debris removal activities

- June 3 - static gas then allocate resources to other zones. Maintenance

- Waste profiling of decontaminated waste has been approved for Class I disposal in El Dorado

0842 START Checks in with TRG (The Response Group). — 25

0845 START departs to CR 34. Work on site map prior to departure.

0950 START arrives at CB4 Culvert. Calibration of MultiRAE RFW 23762

Fresh Air Cal - Pass on all Sensors  
4 Gas (CO, CH<sub>4</sub>, H<sub>2</sub>S, O<sub>2</sub>) — 25

Air Gas Lot # LAM-406-3 — 25  
Cal Gas (Isobutylene(C<sub>4</sub>H<sub>8</sub>)) Lot # BAN.  
248-100-22. — 25

O<sub>2</sub> 18%: 18% pass — 25  
CO 50ppm: 50 ppm pass — 25

LEL 50%: 49% pass — 25

H<sub>2</sub>S 25 ppm: 25.3 pass — 25

Isobutylene 100ppm: 100.0 ppm pass. — 25

Slight odor remains at CR 34 culvert. — 25  
D. Theft for T6 — 25

40 03.19.13

tg 2 West 0002-042-13005

1032 START departs to WIER 2 location  
1040 START arrives at WIER 2. DML

Crew working on washing & clearing  
from mid point from WIER 1 & WIER 2  
and working downstream toward  
WIER 2. START walk creek bank  
down stream pass WIER 2. Approx-  
imately 400-500 yds down stream  
START observed a small pocket of  
oil collected near a fallen tree.

1158 START departs to WIER 1.

1204 START arrives at WIER 1.  
Crew on Lunch.

1228 LOTT George Carter and Deltic  
arrived on site. START discuss with  
George the small oil patch & sheer  
down stream of WIER 2. Also discuss  
privately contaminated soil areas at  
initial spill site that appeared to  
be covered over by new soil.

1245 START departs site.

1254 START arrives at roll off staging  
area (10) 20 yd<sup>3</sup> full boxes were  
observe. TAS crew was preparing to  
count bags placed in several roll off  
DML for TG

03.19.13

tg 2 West 0002-042-13005

to get a representation of how much  
oil has been collected through the  
decom. debris.

1255 START departs for lunch. — 13

1400 START arrives at LOTT initial  
spill site. LOTT crews are working near  
pit. It ~~can~~ not be determined if they  
are removing more saturated soil  
or putting contaminated soil back into  
pit. It was observed the track no  
packing soil around underground  
piping.

1430 START departs to Command/  
Staging area.

1434 START arrives at Command/Staging  
area to see if a side by side is available  
No side by sid. START will walk to  
as many locations starting from below  
Beaver Dam; Hole 1B. No crews in this section

1605 START begins Hole 1C; crews  
blowing, washing, bagging.

1616 Entering hole 2A. Foreman said  
this section possible take 3 days  
to wash, bag, clear.

1640 START begins to head back to  
DML for TG

41

42 03.19.13

tg 2WESTER 0002-012-13005

Command / Staging area.

1655 START arrived at Command /  
Staging area. Readings on Multirae  
DOES, H<sub>2</sub>S, CO & LEL continuously read 0.0  
& O<sub>2</sub> 20.9 throughout the day.

1710 Briefing Meeting (Review meeting)  
In attendance: LOTT, CTEH, TAS, O&G,  
TRG, Code-3, EPA Contractor.

- Briefing Meeting to change to  
Review Meeting will be held at  
the Command Center at LOTT site.

- IC - no

- Situation - Weather

- Operations - Hone 1 cleaning  
& scrubbing; Hone 2 cleaning  
washing, scrubbing; Hone 3  
washing. Tomorrow Hone 2 &  
will remain the same.

- Logistic - equipment coming in  
Decompress containment.

- Finance - get 213s in by 1000.

- Safety - One day, a discovery  
WIER 1 water level high, water  
pump to bring level down

DM had water's on the water  
D/M 14 for T6

03.19.13

tg 2WESTER 0002-012-13005

in waters.

IC - Areas downstream of WIER 2  
with small pooled oil & sheen.  
Areas at LOTT site taken care  
of

- TRG - Security scanning in/out  
at entrance gate. Guests  
will need to be escorted.

1730 Meeting ended.

1800 START departs site.

1806 START checks out departs  
LOTT site. Stop to get supplies for  
field truck.

1840 Arrive at hotel unload equip-  
ment. Will continue documentation  
& upload to Response Manager.

Photolog: photograph to witness dm  
Photo date time direction description

|     |             |    |  |
|-----|-------------|----|--|
| 183 | 031913 1052 | SE | Oil saturated soft boom in<br>hone 3C                                  |
| 184 | 031913 1102 | W  | RP contractor washing &<br>scrubbing banks in hone 3C                  |
| 185 | 031913 1119 | NW | Soft boom not completely<br>stretched across creek<br>(UCB) in hone 3C |

44 03.19.13

| photo | date     | time  | direction | description   |
|-------|----------|-------|-----------|---|
| 186   | 03.19.13 | 11:31 | S         | ~300-400 yds down stream<br>→ to WER 2 piece of oil & sheen   |
| 187   | 03.19.13 | 11:31 | S         | Close up of oil pocket  |
| 188   | 03.19.13 | 11:31 | S         | Close up of sheen   |
| 189   | 03.19.13 | 12:54 | NW        | RP Contractor prep for<br>representation of oil collected<br>from <del>soil</del> contaminated debris |
| 190   | 03.19.13 | 14:04 | S         | RP crew taking/replacing<br>soil w/ contaminated soil.  |
| 191   | 03.19.13 | 14:22 | WSW       | Piping section the oil was<br>released from.  |
| 192   | 03.19.13 | 13:04 | SSW       | AST for onsite refueling<br>→ no secondary containment  |
| 193   | 03.19.13 | 14:12 | E         | RP Contractor raking in<br>Zone 2A along bank   |
| 194   | 03.19.13 | 14:31 | W         | RP Contractor washing bank<br>in Zone 2B  |
| 195   | 03.19.13 | 14:31 | S         | RP Contractor raking bank<br>in Zone 2B   |
| 196   | 03.19.13 | 14:36 | SE        | Oil slug in zone 2B.  |
| 197   | 03.19.13 | 14:37 | SW        | Oil slug in zone 2B   |

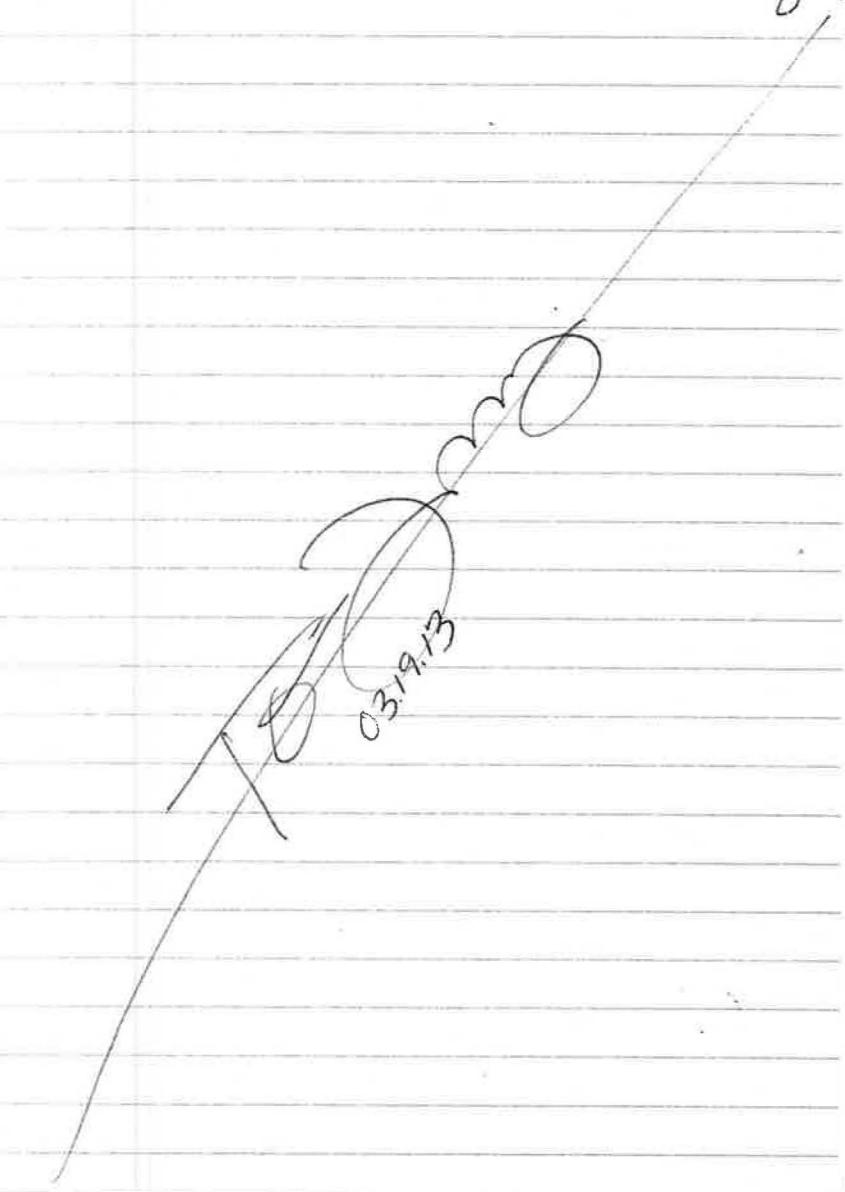
2015 EPA OSC M Hayes contacted START  
 DMcCarty by text for any new updates.  
 EPA DSC will arrive on site tomorrow 03.20.13  
 DRAFT for TG

03.19.13

45

tg 2/weston0002842-13005

He said to continue same tasks as before.



46 03.19.13

tg 2/weston-0002-042-13-005  
0740 START DMcCarty and T(Gomey) depart to Lion Oil Magnolia Spill.

Health and Safety see pages 2-3 logbook!

Weather: Currently 41°F winds N (mph).  
Today: Mostly cloudy becoming partly cloudy in morning, then clear. Highs 55°F N winds 10 to 15 mph. To Gomey To Day  
Physical Hazards: Bug repellent - mosquitoes are out.

0802 START arrives at Command Center which relocated to LOT site.  
0805 Morning Briefing - TRG still preparing to begin meetings

0817 Weather Update: LOT, TAS, CTEH, O&G, EPA Contractor.

- Objectives:
  - ① Safety of Site Personnel
  - ② Protect the Environment
  - ③ (Clean up the Oil) Recovery of Oil

No other information was provided about operations.

0837 Meeting Concluded.

0841 START depart to CR 34 Culvert.

0851 START arrives at CR 34 Culvert  
No apparent oil. foam build up at head of soft boom.

DPM: & Dr. TG

03.20.13

47

tg 2/weston-0002-042-13-005  
0900 Fresh Air Cal & Bump Test on Multirae 23767.  
4 Gas ( $\text{CO}_2$ ,  $\text{H}_2\text{S}$ ,  $\text{H}_2\text{S}$ ,  $\text{O}_2$ ) LOT # LAN-400-3 Airgas  
Isobutylene ( $\text{C}_4\text{H}_8$ ) - 100ppm Air gas lot #BAN-248-100-22  
 $\text{O}_2$  - 18.2%  
 $\text{CO}_2$  - 9.8%  
LEL - 44%  
 $\text{H}_2\text{S}$  - 29.4%  
VOC - 99.5 ppm

Fresh air Cal - all sensors pass.  
0917 RP John Warren sent email to START DMcCarty stating: No additional oil was delivered to 1003 tank yesterday (03.19.13). Per Jack all fracs are empty except for trash & bottoms. Hauled 8 loads of water to refinery.

| 1003 tank Spill Recovery Inventory |       |         |      |            |           |
|------------------------------------|-------|---------|------|------------|-----------|
| date                               | cause | total   | oil  | water      | recovery  |
|                                    |       | station |      | creek      | total     |
| 03.20.13                           |       | 10.5    | 8921 | 5x13 34628 | 3905 1680 |

\*Oil volumes are gross, not corrected for temp, gravity or BS&W.

0940 START begins to walk up stream from CR 34 Culvert to observe soft boom locations. First <sup>soft</sup> boom was observed ~150 yds upstream from DPM: & Dr. TG

48 03.20.13

tg 2/18/2005-042-13005

CR 34 culvert.

1000 START departs to WIER 2.

1003 START arrives at WIER 2. OMI crew continue to wash & scrub in barge 3 from where they left off yesterday to WIER 2. Goal is to complete by noon then move to barge 2 from Large culvert downstream to YellowTree Road.

(5) Crew members working on washing & scrubbing around island. START continues walking to WIER 1. Small areas have ribbon oil and some sheen.

1048 START arrives at WIER 1 (walking LCB). (6) Crew member debris removed from bank & rocking area. Behind hard boom continues with sorbent pads & soft boom being careful not to make the vortex occur again at WIER. (1) LOTI crew member blowing from upstream to downstream to WIER. START observed LOTI Site Safety Review hung at WIER 1.

1051 START heads back to WIER 2 from other side of bank. A walk through for DMR (for TG)

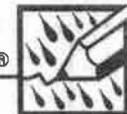
Continued in logbook

CM

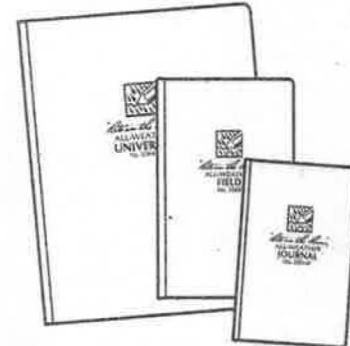
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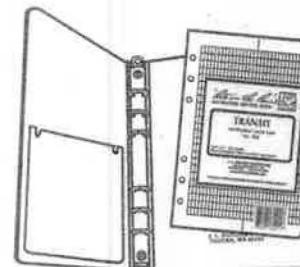
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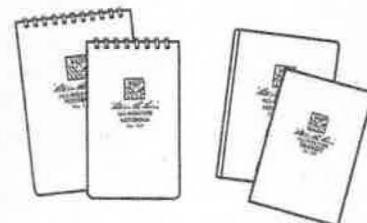
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Nº 391

Lion Oil Magnolia Spill

FRN: E13610

NRC No. 1046525

10465, 012, 002, 0799, 01

TOD No. ~~002-4213-05~~

~~2/Weston - 072-13-005~~

Logbook 3 of 4

INCH



Name PTL David McCarty

**Address** 3900 Dallas Pkwy St 175  
Plano TX 75093

Phone 4109.666.5500

Project Lion Oil Magnolia Spill  
TOD No. ~~0002-042-13205~~  
aw/ertha  
WON: 20406.012.0709.12  
EPA OSC Mark Hayes

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## CONTENTS

| PAGE | REFERENCE  | DATE |
|------|--|------|
|      | SCRIBE: Tori Gomes (tg) To: Jim<br>Field Notes David M. Carty DMJ 8/18/13<br>Field Map: Logbook ( pg 8-9<br>Logbook Reviewer - Hilary Gafford 6/18/13<br><hr/> | 2009 |

## Equipment

Multi RAE - RFW 23767

GAG

Camera - Olympus Stylus Tough RFW 2373

2 03.20.13

tg 2 West 002-242-13005

Contains from logbook 2  
Daily field trash needs to be conducted as well as picking large contaminated debris. Moccasin spotted on bank.  
1050 START arrived at WIER 2. Head to downstream area to check pooled oil found yesterday 03.19.13 from WIER 2.

1200 Pooled oil has been picked up.

1230 START departs site for lunch & gas.

1410 START Gomey & D'McCarthy return to site Staging area (old Command Center). START D'McCarthy work on documentation. Gomey will observe the operations in Hole 1.

1625 START D'McCarthy joins Gomey walking through Hole 1.

LATE ENTRY 1545 EPA OSC Mark Hayes and Brandi Todd arrive on site.

1700 START arrive at Staging area.

1854 START depart to Command Center

1854 START arrives at Command Center. MultiRAE VOC H<sub>2</sub>S CO HE read continuously 0.0-0.9.

1803 Briefing meeting:

In attendance: LOTT, TMS, TRG, CTEH, CEO, EPA  
Agenda:

DLM for TG 3/20/13

03.20.13

tg 2 West 002-242-13005

Situation: 104 personnel on site (5ec) ft sorbant booms, (600) ft hard boom, (8) skimmers (7) vac trucks, (4585) bbl of oil collected. No waste left <sup>prepping</sup>

Action: None 1A - washing, waiting on water. (2) additional water pumps

~225 yds from skimmer placed. Need additional hoses. Doodle Buddy did not make it today. Should be there tomorrow.

None 2A - replacing sorbent boom as they wash down Creek. Need additional equipment.

None 3A - skelton crew blowing emulsion coming to the surface, skim to WIER 1.

Skelton crew down near WIER 2 washing emulsion to boom area.

None 1C - tree removed to increase flow & oil to more free oil downstream. Need for detail daily reports.

1818 Briefing ended.

1825 EPA OSC M Hayes & OSC BTodd and START depart to historical Staging Area.

1831 EPA OSC M Hayes & OSC BTodd and START depart to historical spill area south of Beaver Dam.

DLM for TG 3/20/13 <sup>Remember</sup>

3

4 03.20.13

tg 2/western 0002-42-13005

1834 Arrived at historical spill to assess the area and observe the Beaver Dam area.

1852 EPA OSC mHeunes & OSC BTodd & START depart to Stepping area.

1858 EPA OSCs depart site.

1905 START departs site.

1907 START signs out and heads to hotel.

1917 START arrives at hotel unloads equipment. Will continue documentation & uploading to Response Manager.

Photo log: photographer tg witness dm  
photo # date time direction description

|     |          |      |     |  |    |
|-----|----------|------|-----|--|----|
| 198 | 03/20/13 | 1049 | W   | WIER 1 location.                                       | 20 |
| 199 | 03/20/13 | 1055 | NE  | LOTT-Site Safety Review at WIER 1                      |    |
| 200 | 03/20/13 | 1111 | W   | ONI crew washing banks in zone 3                       |    |
| 201 | 03/20/13 | 1138 | S   | Snake found in zone 3.                                 |    |
| 202 | 03/20/13 | 1157 | S   | Pocket of oil picked up ~300 yd down stream of WIER 2. | 20 |
| 203 | 03/20/13 | 1523 | S   | AST w/ secondary containment?                          |    |
| 204 | 03/20/13 | 1557 | W   | Soilbar pads soaking oil at Red Bridge                 |    |
| 205 | 03/20/13 | 1557 | SSW | Downstream of Red Bridge                               | 20 |
| 206 | 03/20/13 | 1557 | NW  | Upstream of Red Bridge                                 | 20 |
| 207 | 03/20/13 | 1603 | S   | Beaver Dam area. J. H. S. G.                           |    |
| 208 | 03/20/13 | 1603 | SSW | Beaver Dam area. for TG 3/20/13                        |    |

5 03.21.13

tg 2/western 0002-42-13005

0745 START DMcCarthy and TGomez depart for Lion Oil Magnolia Spill

### Health & Safety

Objective: Respond to site in timely manner, provide written & photo graphic documentation.

Physical Hazards: Driving, Traffic, slip trips falls, cold/warm weather, widow makers, animals wild & domestic.

Chemical Hazards: Crude Oil, BTEX, flammable explosive.

Radiation Hazards: NORM, sunlight, ionizing

Weather: Currently 36°F partly cloudy SE winds 1 mph. Today: Chance of light rain slight chance of TS in afternoon 20%.

SW 10-15 mph. 10% chance of TS in evening E winds 10-15 mph.

PPE: Level D; 10ft within creek, coated tyvek, rubber boots, gloves, hat, safety glasses. Hospital info: Magnolia Regional Medical Center

101 Hospital Dr. Magnolia, AR 71753 ph. 870.235.3000

Allergies: David McCarthy - Penicillin - no corrective lenses

TGomez - no corrective lenses

Signatures: David McCarthy D. Mcc D. Mcc

TGomez T. Gomez T. Gomez

0803 START arrives at Command Center. DYMCC for 3/21/13 Reinhardt

03.21.13

to 2/~~western~~ 042-13005

OSOS Morning Briefing:

In attendance: LOTT, CTEH, EPA, TAS, TRG  
O&G.

Objectives: Protect people, the environment & recovery of oil. Air monitoring for community & workers. Skimming & Recovery of oil & debris removal with regard to environmentally sensitive areas.

0812 Meeting ended.

0825 EPA OSC M Hayes was discussing with IC LOTT George Carter & TAS Operations Jason & Mike and START DMcCarthy daily operations.

June 1 - (3) wash pumps (8) crew members working in Beaver Dam area. Skimming w/ rope skimmer June 2 - 2A to 2B (4) crew members working, debris removed. 2B to 3A (4) Crew members working, clearing debris following behind in 2A have a wash crew working all the way down 3A.

0835 EPA OSC M Hayes tasked START to continue air monitoring and observe operations throughout spill area.

0855 START depart to CR 34 Culvert RP (3) crew O&G at CR 34. Preparing for soft D&M 6/3/13 for TG

03.21.13

to 2/~~western~~ 042-13005

boom replacement & debris clearing at booms START preps for calibrating MultiRAE.

0935 Calibration of MultiRAE 23707

Fresh Air Cal - pass on all sensors.

4 Gas ( $\text{CO}_2$ ,  $\text{CH}_4$ ,  $\text{H}_2\text{S}$ ,  $\text{O}_2$ ) Air Gas Lot # LAM-446-3

Isobutylene ( $\text{C}_4\text{H}_8$ ) 100ppm Air Gas Lot# LAM-248-100-2

$\text{O}_2$  18%: 18% pass

$\text{CO}_2$  50ppm: 50ppm Pass

LEL 50%: 49% Pass

$\text{H}_2\text{S}$  25ppm: 25.2ppm pass

VOCs 100ppm: 100ppm pass

0945 START observing RP contactor replacing soft boom & debris removal. A crew member went to retrieve equipment.

0955 EPA OSC M Hayes and BTodd arrived at CR 34 Culvert to observe boom area.

1008 EPA OSC's depart site.

1013 START depart CR 34 Culvert to WER 2.

1023 START arrives at WER 2. START DMcCarthy works documentation TBooney observes LCB. No crews working in area. Sheening small light pools & ribbons of oil visible.

1138 Air monitoring crew TRG arrives.  
D&M 6/3/13 for TG 3/2/13

standard

8 03.21.13

- tg 2/Weston-0002-042-1300S  
1140 TRG departs —  
1145 START departs to Command Post  
Weather: Currently 47°F Winds ESE 10 mph.  
40% chance of rain. —  
1155 START arrive at Command Post  
to meet up with EPA OSCs. —  
1258 EPA OSC MHayes called START  
DMcCarty will meet for lunch. —  
1200 START departs site for lunch. —  
**LATE ENTRY** 0931 RP John Warren sent email  
to START DMcCarty stating: Will probably  
stop hauling water after today. Have  
demulsifier ordered to help separate  
oil layer. All free tanks are now  
empty except for oily debris in bottom.  
1003 tank spill Recovery Inventory  
date gauge total oil water Recovery Total Recovery Total  
03.21.13 9.375 7065 5x89 2336 2905 2016  
\* Oil volume are gross... not corrected for  
temp, gravity or BSEW. —  
1405 START arrives at LOTT site. START  
DMcCarty calls EPA OSC MHayes to discuss  
Costs. —  
1430 START departs to Staging area.  
1433 START <sup>arrive</sup> at Staging area.  
DYM's for TG 3/21/13

9 03.21.13

- tg 2/Weston-0002-042-1300S  
1446 START departs site. Beginning to  
rain. —  
1450 START starts arrives at Big House Road.  
Field get stuck. MAC's pulled out  
field truck. —  
1500 START DMcCarty got a call  
from IC George Garter (LOTT) asking  
to come to initial spill site at LOTT site  
for observing and questions. —  
1513 START departs to LOTT site. —  
1517 START arrives at pit. IC GGarter  
informs START that the LOTT crew  
is preparing to decommissioning the old pipeline.  
Started filling it in. IC saw the operation.  
& called START for action. START DMcCarty  
Calls EPA OSC MHayes for direction. —  
EPA OSC MHayes calls START  
DMcCarty back. START DMcCarty discusses  
with IC GGarter EPA's direction. —  
IC GGarter also informs START  
that an incident occurred this  
morning with a crew member  
slipping over cypress knobs & landing  
one in the hip while hitting himself in  
the jaw area with the water hose. —  
DYM's for TG 3/21/13 — *location*

10 03.21.13

to 2 West 6002-042-13005  
or

Crew member was not taken to hospital because he felt fine to continue to work. There were no cuts or bleeding & did not need medical attention.

1542 IC GGarter provided Preliminary Summary Air Monitoring for 03.16.13-03.17.13, 03.18.13, & 03.19.13.

1545 START departs LOTT site. START Coordinates for START rotation starting Sunday March 24, 2013 for START onsite replaced by (2) START.

1630 START arrived at Large Culvert. (2) Crew member (civil). Skimmer not running at the moment. Crew blows off load in VAC truck on tie with full load. VAC at  $\frac{1}{4}$  today.

1649 START departs for Yellow Tree Road

1653 START arrives at Yellow Tree Road. (1) felt skimmer (1) VAC truck not running upon arrival. Oily debris waiting for removal & skimming. Upstream crew waiting for right of way access. (5) crew members in Zone 2B. Debris removal & skimming.

1718 START depart to WIERI.  
DSM's LT for TG for 3/21/13

11 03.21.13

to 2 West 6002-042-13005  
or

1720 START observed (1) skimmer (1) VAC truck at small culvert en route to WIERI.

1722 START arrived at WIERI. EPA JSC M Hayes & OSC BTodd.

1735 EPA OSC's depart ~~site~~ WIERI site.

1737 START depart WIERI site to Command Center for Briefing (1cc).

1758 START arrived at Command Center. MultiRAE VOCs H<sub>2</sub>S, CO, ELEL continuously read 0.0 and O<sub>2</sub> 20.9 all day.

1800 Briefing!

In Attendance: EPA, LOTT, TAS, O&G, CTEH, TRG.

Incident Command:

Situation: Day 12 (23) personnel onsite (7) VAC trucks, (12) skimmers, (50) boom, no waste has left site. Waiting on HPERQ for approval.

Weather: 60% chance of rain.

Safety: (1) incident (discussed earlier w/ IG). Op

Operation - Zone 1 washing lots of debris. Zone 2 - lot of debris, washing, skimming. Del M/T 3/21/13 for TG

Pete in ashcan

12 03.21.13

tg 2/Weston 0002-012-13005  
dm

- Unseen crew working from CR 32 culvert upstream, cleaning debris & replacing boom.

- Operations:

(1) additional personnel to Zone 1 washing, skimming, debris removal 03.22.13. Zone 2 lots of debris removal. Need road / access points, washing debris pricing. Zone 3, debris removal needs picked up & containerized. Trial run on throwing down Gator Sorb with permission from EPA as long as it is removed.

- LOTT working on initial spill site, staging contaminated soil onto poly.

- Decon totes are full either need to go off site for removal or use VAC truck.

1820 Briefing completed. EPA OSC <sup>MHayes</sup> task start to continue over site tomorrow.

1824 EPA OSCs depart site.

1826 START scan out and depart site.

1840 START arrived at hotel & unload truck. Will continue documentation & uploading to DMS for TG 3/21/13

03.21.13

tg 2/Weston 0002-012-13005  
dm

Response Manager:

LATE ENTRY 1830 EPA OSC M Hayes clarified with IC Garter all oil contaminated soil needs to be removed from decontamination area.

Photo log: photographer tg witness dm  
photo date time direction description

|     |          |      |    |  |
|-----|----------|------|----|--|
| 209 | 03/21/13 | 1011 | NW | RPMI crew removing debris<br>2 replacing boom at CR 34 culvert |
| 210 | 03/21/13 | 1055 | W  | Emulsified oil resurfacing<br>upstream of WIER 2               |
| 211 | 03/21/13 | 1056 | SW | Emulsified oil resurfacing<br>upstream of WIER 2               |
| 212 | 03/21/13 | 1058 | SW | WIER 2 location  |
| 213 | 03/21/13 | 1058 | SE | WIER 2 location  |
| 214 | 03/21/13 | 1106 | SW | Emulsified oil resurfacing<br>upstream of WIER 2               |
| 215 | 03/21/13 | 1106 | S  | Emulsified oil resurfacing<br>upstream of WIER 2               |
| 216 | 03/21/13 | 1459 | S  | Big House Road location  |
| 217 | 03/21/13 | 1500 | E  | Big House Road location  |
| 218 | 03/21/13 | 1720 | SE | New skimming location  |
| 219 | 03/21/13 | 1720 | SW | Small culvert heading toward<br>New skimming location          |
| 220 | 03/21/13 | 1720 | SW | Small culvert heading toward<br>Rte in the Rain                |

03.22.13

14

~~2/ Wester 2003-042-13005~~

0745 START D McLeavy and T Gomey depart  
to Lion Oil Magnolia Spill. Health & Safety.  
See page 5. tg

Weather: Currently -43°F Cloudy Sprinkle  
Winds E 8 mph. Today - Hi 59° cloudy 40%.

Physical: Due to weathering surfaces will be slippery. ~~D. mch D. r. e. g.~~ to

0759 START arrives at LOTT, Command Center. EPA OSC M Hayes and OSC BTodd onsite.

## 0807 Morning brief:

In Attendance: LOT, TASEPA, ADEQ, TRG, CTEH, CB.  
Responsible Objective: Human health, protect the environment. Clean up the oil.

-Current Change in operational period from 24 hrs to 48 hr.

Saturday - Hi - low 50s thunderstorms developing early to late afternoon.

Operation - Plan has nothing change  
Zone 2 - a lot of snakes - several  
nest - causing in the area. 1) nest  
in 1B and several nest in 2A.

0815' Briefing meeting ended. ADEQ and EPA discuss ADEQ visiting the  
DOE site for T6 3/22/13

03.22.13

tg Zweijensee 2042-13005

Site on a more regular basis more than once a week. A formal email from EPA to ADEQ will be needed. Discuss <sup>to</sup> Soil Remediation at initial spill site location. ADEQ stated RP can remediate on site as long as it is in a burned area. ADEQ stated analysis should be done for TPH prior to disposal. <sup>to</sup>

IC George G(Lott) stated they have been in contact with State waste department which recommends full TCLP on all waste soil prior to disposal. ADEQ ~~has~~ stated to follow State's HazWaste recommendations. IC GGarter discuss looking at waiv

To dispose of flush water but will slow remediation activities. LOTT is hoping to get approval to send waste in roll-off containers to Class I landfill. EPA OSC MItteags and ADECQ will both be involved and coordinate site visits among each other or each agency. LOTT stated they were contacted by local Marquette news. The spill was discussed D8 m' 0 for T6 3/22/13 *Resub.*

16 03.22.13

tg 2/Westn ~~0002042-13005~~  
at the Local Emergency Planning Committee (LEPC) meeting. LOTT stated insurance adjusters will be on site this Wednesday (03.27.13).  
0840 EPA OSC M Hayes stated START can demobilize on 03.27.13 in morning. RP provided IAP period 7 (03.21-22.13 0700-02)  
0910 START departs to CR 34 culvert  
0930 START arrives at CR 34 culvert to calibrate multi RAE & observe LCB.  
0945 Calibration of multiRAE #23767 Fresh Air Cal - pass on all sensors.  
4 Gas ( $\text{CO}_2$ ,  $\text{CH}_4$ ,  $\text{H}_2\text{S}$ ,  $\text{O}_2$ ) Air Ga Lot # LAM-406-3  
1 Isobutylene ( $\text{C}_4\text{O}_8$ ) 100 ppm AirGas Lot # BAN-248-100-23  
 $\text{O}_2$  18%: 18% pass  
 $\text{CO}_2$  50 ppm: 50 ppm pass  
LEL 50%: 49% pass  
 $\text{H}_2\text{S}$  25 ppm: 25.2 ppm pass  
VOCs 100 ppm: 100.2 ppm pass  
0952 START departs to WIER 2.  
0958 START arrives at entrance to WIER 2. Gate is closed & locked. ADEQ, EPA, TAS, IC Safety at entrance. LOTT Jack arrives to unlock gate.  
1001 All parties arrive at staging area  
DX m/s D for TG 3/22/13

17 03.22.13

tg 2/Westn ~~0002042-13005~~  
of WIER 2 for the <sup>DM</sup> experimental for Gator sorbant.  
1005 Begin set up for Gator sorbant experiment. OM contractor performing.  
1023 Experiment. Gator sorb begins to be blown onto creek area in zone 3C.  
1105 Experiment completed. Change out soft boom.  
1115 EPA OSC M Hayes and OSC BTodd departed WIER 2. All other intitites begin to depart. EPA OSC will then depart from response. START communicates for charged to  
1135 START departs WIER 2 for command center.  
[LATE ENTRY] 1110 IC, EPA and ADEQ discuss the use of Gator sorbant on response. EPA OSC M Hayes stated he approves use of Gator sorbant as long as RP removes it shortly after application. ADEQ had no other comment.  
1205 START departs for lunch.  
1305 START arrives on site head to WIER 1.  
1308 START stops right of way in zone 2A to observe cleaning crew. (7) ACME crew members clearing debris/washin  
DX m/s D for TG 3/22/13 *Rita in charge*

18 03.22.13

tg 21 West ~~0002-042-13005~~  
1335 START departed to Large Culvert.  
1340 START arrives at Large Culvert  
None. 2A / 1C. (3) OMI crew members  
rolles skimmer running. ~~at a~~  
Skimmer running at a lower rate  
to be able to collect higher volume of  
oil.  
1355 START departed to Yellow Tree Road.  
1401 START ~~departed~~ arrived at Yellow  
Tree Road. Several crew members (6)  
downstream no one at Yellow Tree Road.  
racking debris ~~dots~~ & moving downstream.  
1426 START departs to WIER 1.  
1433 START arrives at WIER 1. VAC  
E skimmer staged at small culvert  
not running at this time no  
oil in area. (8) OMI crew <sup>wash</sup> debris removal  
washing to WIER 1. (1) skimmer (1) VAC  
truck & (1) frac tank at site. (2) loads  
from frac tank have been taken today.  
1518 START departed to CR 34 culvert.  
1525 START arrives at CR 34 culvert.  
Some foam build up on downstream (S)  
of <sup>CR 34</sup> target Culvert.  
1535 START departs to Staging area.  
DD MSA for TG 3/22/13

03.22.13

19

tg ~~21 West~~ ~~0002-042-13005~~  
Current Weather: 48°F prep: 0.1" wind  
E 7 mph. Cloudy ~~overcast~~  
1545 START stopped at LOTT site on  
way to Staging area. LOTT crew  
has completed filling in the  
decommissioning pit at initial spill  
site. (4) roll off in staging area. (3) 20yd<sup>3</sup>  
(1) 14yd<sup>3</sup>.  
1600 START departs to Staging area.  
1602 START arrives at Staging area.  
(4) walk down to Beaver Dam. (1) crew  
member washing. Beaver Dam  
area, skimming, & debris clearing  
continues.  
1755 START departs to Command  
Center.  
1757 START arrives at Command  
Center. MultRAE VOCs H<sub>2</sub>S, CO, LEL  
continuously read all day 0.0 and O<sub>2</sub> 20.9.  
1805 Briefing.  
OPS: None 1A washing & bagging today  
and continue tomorrow, 1B - started  
today. 1C Wash twice and removed  
skimming. 1A rope skimming until  
wash and complete.  
DD MSA for TG 3/22/13 ~~Per plan~~

20

03.22.13

to 21 West 0002 042-13-005

2A - Crews finished washing bagging today from 66 House Road to large culvert to right of way and tomorrow right of way to large culvert.

3B - complete to almost done with washing and debris removal creek crossing to WIERI crew will move to 3A when done. 3D recon tomorrow.

Safety: (1) Crew member crossing over log slipped he is OK

Situation: Weather light drizzle. Tomorrow heavier rain 1/10 - 1/2" possible.

- Remember 48 hr operational period.

1815 Meeting ended

1830 START scan out and depart site.

1845 START arrives at hotel. Upload

equipment and continue documentation

Photolog: photographer to witness dm

photo date time duration description

220 032213 1020 N Gator索 being used for experiment

221 032213 1024 NNN Gator索 being applied to a section in phone 3C

222 032213 1029 NNW Gator索 applied RP contractor to OML washing down to boom area.

223 032213 1037 NNW Washing Gator索 downstream

2X ME 10 for TG 3/22/13

03.22.13

21

by 21 West 0002 042-13-005

Photo log, Continued  
Photo date time duration description

|     |        |      |     |  |
|-----|--------|------|-----|--|
| 224 | 032213 | 1013 | NNW | RP contractor OML removing Gator Sorb from creek             |
| 225 | 032213 | 1048 | NNW | Removing Gator Sorb from creek                               |
| 226 | 032213 | 1056 | NNW | Removing Gator Sorb from downstream side of boom.            |
| 227 | 032213 | 1112 | NNW | Creek after removal of Gator Sorb.                           |
| 228 | 032213 | 1330 | SE  | Right of way area in zone 2A, debris picked up.              |
| 229 | 032213 | 1546 | S   | Initial spill site decommission pit filled in                |
| 230 | 032213 | 1546 | SE  | Initial spill area   |
| 231 | 032213 | 1548 | SE  | Containment pond   |
| 232 | 032213 | 1548 | NW  | Initial spill area   |
| 233 | 032213 | 1648 | S   | (5) RP contractors (ACME JKristie) washing Beaver Dam area.  |
| 234 | 032213 | 1657 | SW  | (2) RP contractors (ACME & JKristie washing Beaver Dam area. |

Rite in the Rain

22 03.23.13

tq 2105 0002-043-13-005

0755 START DMCCarty and TGamey depart to Lion Oil Magnolia Spill. →  
Health & Safety see page 5. →  
Weather: Currently - 46°F raining lightly.

Winds ENE 4 mph. Today - Showers & T-Storms likely. HI 59°F Cloudy. NE winds 5-10 mph. Chance of rain 60%. →  
Physical: Fatigue - don't rush through tasks, be conscious pay more attention & get rest. →  
D. McCarty P.M. T. Gamey

0810 START arrived on site checked in. →  
Head to CR 34 Culvert. →

0830 START arrives at CR 34 culvert.

LATE ENTRY 11045 03.22.13 R P John Jensen  
Sent an email to START DMCCarty stating the 1003 tank at noon today after emulsifier had been added & mixed w/ VAC trucks. The total gauge was 7'9" & the water 1'7". Based on 70.8 bbls to the inch gives an oil add total of 5235 bbls minus the original oil volume of 708 bbls. The total recovered oil is 457 bbls. The gauge had difficulty determining the water level yesterday. John had him pull a 3 ft level & 3 foot level DLM for 16 3/23/13

03.23.13

tq 2105 0002-043-13-005

and run a shake out of samples. At 3ft water content of oil was 0.8% at 5ft water content of oil 50%. There is a significant layer of rag. If chemical added today does not clean rag layer, additional chemicals will be added. →

1003 tank spill recovery inventory station creek  
date gauge total oil water recovered/recovery total  
03.22.13 7.75 6584 5235 1359 2905 1612

\*Oil volume are gross... not corrected for temp gravity or BS&W. →

0840 Fresh air calibration & Bump test on MultiRAE RFW 23767. →

Fresh air Cal - pass on all sensors  
H Gas (CO, CH<sub>4</sub>, H<sub>2</sub>S, O<sub>2</sub>) Air gas lot # LAM-406-3 →

Isooctylene (C<sub>8</sub>H<sub>18</sub>) lot # BAN-248-100-22  
O<sub>2</sub>: 18.1%. →  
CO: 48 ppm →

LEL: 51%. →  
H<sub>2</sub>S: 24.6 ppm →

Isooctylene: 47.4 ppm →

0855 Depart to WIER 2 location

0913 START arrived at WIER 2 location  
water level in LCB is up some.  
DLM for T6 3/23/13

23

24 03.23.13

tg 2 Water 042-13-005

Water pump at WIER 2 turned on  
to bring down water level for  
incoming rain system.

0955 START depart for WIER 1

1004 START arrives at WIER 1. Crew S  
bring oil slug down to WIER 1. Rain  
System coming in moving fast. Water  
pump at WIER 1 on idle & ready to  
pump at moments notice.

1028 START departs to Pipe bridge.  
Crews downstream of Pipe bridge.  
Clearing debris.

1046 START depart to Large Culvert

1100 START arrive at Large Culvert  
Crews just downstream. MAC's  
tree cutters downstream. Heavier  
rain falling. Storm system arrived.

1105 START departs to Staging Area

1110 START arrives at Staging Area.  
Beaver Dam area crews are  
washing & skimming. Stops raining.

1205 START departs to Command  
Center to pick up incident documents  
IC George Garter provided, Summary  
of TAS Environmental Hand Held

QMSCT for T6 3/23/13

03.23.13

tg 2 Water 042-13-005

Hhr Monitoring Activities for 03.18.13,  
03.19.13 & 03.20.13. Will send IAP

03.22.13 - 03.23.13 via email to START

McCarty, IC Garter stated got  
approval for roll off boxes to move  
obj site for disposal starting Monday  
03.25.13. He also stated they got  
approval from land owners to cut  
small path along creek in zone 2  
for access to pick up contaminated  
debris. Crews are working on  
tree cutting today. Working on plan to

1220 START departs to pump water  
out of north detention pond to flush  
creek.

1320 START departs site for lunch.

1320 START returns to site CR 34  
Culvert.

1343 START departs to WIER 2.

1357 START arrives at WIER 2. Water pump  
not on, no crews working. Weather currently  
57°F cloudy NE winds 8 mph.

1410 START departs to staging; WER 1,  
Yellow Tree Road. Large Culvert along  
way.

QMSCT for T6 3/23/13

Rite in the Rain

26 03.23.13

to 2 West 0002-13-005

1555 START arrive at Staging Area.  
Begins raining - moderate.

1633 TAS Mike stated stop operations  
due to weather. TAS, ACME, OMI  
Remaining on site. Depart to WIER 2.

1650 IC Garter (LOTT) called stated  
the same information as TAS.

1658 START arrived at WIER 2. LOTT  
Jack is only personnel onsite.

Manning the pumps & watching  
WIER for creek rise.

1708 START departs to staging  
area.

1725 START arrives at staging. Some  
ACME & OMI crews departing.  
Code 3 & JXistic already depart  
spill site.

1735 START departs site, head to  
hotel.

1750 START arrives at hotel,  
unload equipment. Will continue  
documentation.

Photo log: Photographer to witness dm  
See log on follow page 27.

D. McCarty Fort 6 3/23/13

03.23.13

to 2 West 0002-13-005

27

Photo log Continued

| photo | date   | time | direction | description   |
|-------|--------|------|-----------|---|
| 235   | 032313 | 0936 | E         | WIER 2 pump water from<br>upstream before rain system   |
| 236   | 032313 | 0936 | W         | WIER 2 location   |
| 237   | 032313 | 1012 | W         | WIER 1 location   |
| 238   | 032313 | 1012 | E         | WIER 1 location   |
| 239   | 032313 | 1014 | NNW       | OMI crews washing the banks<br>upstream of WIER 1.  |
| 240   | 032313 | 1100 | SE        | Crews clearing debris down<br>stream of Large culvert.  |
| 241   | 032313 | 1101 | NW        | Large culvert location  |
| 242   | 032313 | 1659 | WSW       | WIER 2 before large storm<br>system moved into area   |
|       |        |      |           | 1958 EPA OSC MHayes sent text message to<br>START DMcCarty for update on operations<br>at spill response. |

KC 03.23.13

Ritter et al.

28 03.24.13

Tg 2 West 0002042-13005

0750 START D McCarty & T Gomes depart for Lion Oil Magnolia Spill. See Hether. Safe page 5.

Weather: Currently +46°F cloudy W winds 12 mph gusts 34 mph. Today - Windy 30% chance of rain. Mostly cloudy. Hi 55°F W winds 15-35 mph gusts up to 35 mph.

Physical Hazards: Cold weather, ~~in~~ Garry Tooms

LATE ENTRY 0740 RP John Warren (LOTT)

Sent email to START D McCarty providing 1003 tank spill recovery inventory

| date     | group | total | 0.1  | water | station | creek | recovery | total | recovery | total |
|----------|-------|-------|------|-------|---------|-------|----------|-------|----------|-------|
| 03.23.13 |       | 7.75  | 6584 | 5229  | 1359    |       | 2905     |       | 1612     |       |
| 03.24.13 |       | 7.92  | 6729 | 5242  | 1487    |       | 2905     |       | 1629     |       |

\*Oil volumes are gross, not corrected for temp, gravity or BS&W.

0800 START arrived at Command Center.

0805 Morning Briefing:

Objectives: Have not changed.

- WIER 1 was washed out last due to heavy rain. High winds - loose branches

OPS:

- Hone 1A: S wash, pumps, & rope mop.
  - Hone 1B: Crew begin bagging debris
- D. L. M. 1A for Tg

03.24.13

Tg 2 West 0002042-13005

Hone 1C: Completed lay sorbant boom  
Hone 3A: Crew washed & Sorbent boom in place. Will begin bagging second half. Crews added mats to soft areas for access.

Hone 3B: Creek crossing to WIER ~~probably done. 3B crew will move to 3A when they complete.~~

~~Hone 3D Recon tomorrow 03.25.13.~~

Hone 2B - Washing bagging completed. Hone 3A completed bagging to halfway. 3B remove debris near boom - due to rain. Recon this morning & fix booms. WIER 1 will evaluate & develop game plan.

0817 Morning Briefing concluded. START departs to WIER 1.

0830 START arrives at WIER 1. It is not known at this time the approximate time the WIER broke. It has been suggested ~2100-2130 on 03.23.13.

Crews will decommission the WIER tomorrow 03.25.13.

0847 START departs to WIER 2.

0853 START arrives at WIER 2.

LATE ENTRY 0814 Safety be aware of surroundings look above you & around you knee deep DJM 1A for Tg

R. Johnson

29

30 03.24.13

tg 2/West 042-13005

yesterday may be neck deep today. Any level hip high crew member has to have PFD on. Contaminated waste will either go to WCA or Webster. Decan water storage needing totes but unable to locate locally. TBS suggested a place RP will look into it.

0903 CMU crew blowing oil & removing debris caught at beams upstream off WIER 2. LCB did cut the bank at a couple locations in Zone 3C and one location from Zone 3B to Zone 3D. no oil went past WIER according to RP Contractor. Inch of rain fell in area.

1008 START departs to CR 34 culvert.

1016 START arrived at CR 34 culvert

Small sheen is observed ~~at 9 am~~ on

northside of culvert. One soft boom detained S side.

LATE ENTRY] 1003 EPA OSC Miltayes called

Absent update due to recent rain

storm. He left message.

1018 START D McCarty called OSC Miltayes

update on operations and recent

rain event.

1030 RP IC, logistic arrived at site

Det NLC to TG

03.24.13

tg 2/West 042-13005

to observe conditions.

1040 RP IC, logistic, & situation departed.

1045 Fresh air Calibration & Buoy Test on MultRAE.

Fresh air Cal - Pass on all sensors

4Gas (CO, CH<sub>4</sub>, H<sub>2</sub>S, O<sub>2</sub>) AirGas LOT #

LAM-406-3

Isobutylene (CH<sub>2</sub>Hg) LOT # BAN-248-100-32

O<sub>2</sub> - 17.8%

CO - 47 ppm

LEL - 49%

H<sub>2</sub>S - 23.8 ppm

Isobutylene VOCs - 100.6 ppm

1120 START departs for Staging area

1127 START stops at initial spill site

to observe water level in detention

pond. START also observed there are

(18) roll off boxes at roll off staging

area. Continued to Response staging

area.

1138 START arrived at staging to

observe operations at Beaver Dam

with update on operations and recent

rain event.

1230 START departs for lunch.

04/25/13 for TG

32 03.24.13

tg 2 Wester 0002 H2-1305

1355 START arrives at LOTT site head  
to Large Culvert to observe operations  
in zone 2.

1405 START arrives at Large Culvert.  
Current Weather: 45°F partly cloudy  
NNE winds 0 mph. Crews up downstream.

1444 START departs for Yellow Tree Road

1449 START arrives at Yellow Tree Road  
Crews are working downstream,  
clearing debris.

1537 START departs to work on  
documentation.

1750 START departs to Command  
Center.

1756 START arrives at Command Center  
MultRAE VOCs, H<sub>2</sub>S, CO, & ELEL continuously  
read 0.0 and O<sub>2</sub> 20.9 all day.

1802 Briefing:

Day 16 of Response. Starting to  
debrief personnel (120+) & resources  
OPS:

Zone 1A: washing & bagging

Zone 1B: making progress

Zone 1C: Done changing out debris

Zone 1A: halfway complete bagging  
DMIC best 9

03.24.13

tg 2 Wester 0002 H2-1305  
debris.

Zone 2B: Wash crew is just about to  
pipe bridge.

Zone 3A: Still bagging, wash crews  
coming into area tomorrow.

Zone 3B: maintenance & changing  
out sorbant boom. Zone 3C: almost complete

Zone 3D: Change out sorb boom/headsroom

Safety: House keeping issues along  
banks, staging area, along road.  
Situation - waiting for state to  
do final approval to get rid  
of waste.

1811 Meeting completed.

1815 START signs out and depart Site.

**LATE ENTRY** 1800 IC Garter (LOTT)

provided START with Summary of TAS  
Environmental Hand Air Monitoring Activities  
Summary for 03.21.13, 03.22.13 & 03.23.13,  
and Summary of Tas Environmental  
Area RAE Air Monitoring Activities 03.21-23.13.

1829 START arrived at hotel, unload  
equipment. Will continue documentation.

Photo log: photographer tg witness dm  
see pag 34 for photolog.

D 3/25/13 for TG

Rite in the Rain

33

34 03.24.13

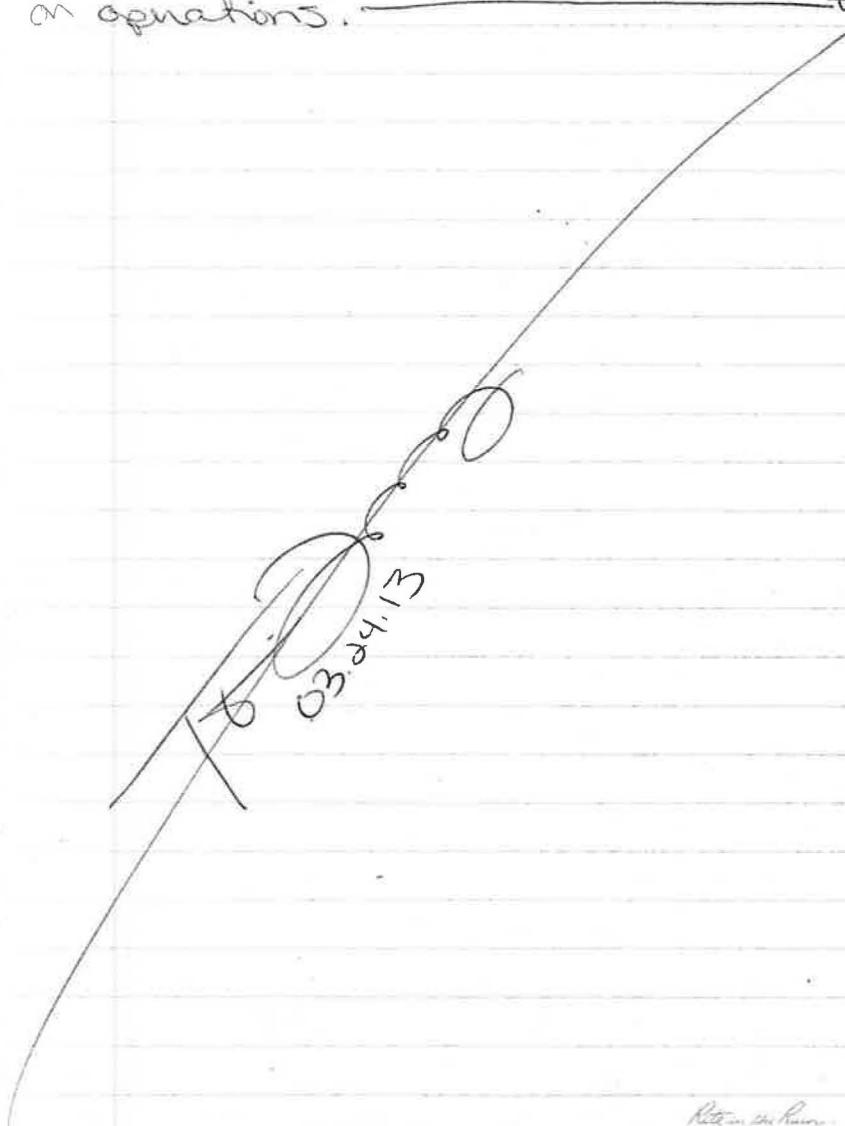
tg 21 West 0002 04 2-13 205

Photolog Continued

| photo # | date   | time | direction | description  |
|---------|--------|------|-----------|--|
| 243     | 032413 | 0837 | NE        | WIER 1 location. WIER 1<br>tg broke during rain event.                       |
| 244     | 032413 | 0838 | NNW       | WIER 1 location. — 26  |
| 245     | 032413 | 0912 | WSW       | Boom area in Zone 3 after<br>rain event. — 26                                |
| 246     | 032413 | 0912 | SE        | Boom area Zone 3. — 26   |
| 247     | 032413 | 0916 | NW        | RP Contractor picking up<br>debris & oil in Zone 3 after<br>rain event. — 26 |
| 248     | 032413 | 0917 | SW        | RP Contractor picking up<br>debris & oil in Zone 3 after<br>rain event. — 26 |
| 249     | 032413 | 0920 | SW        | WIER 2 after rain event  |
| 250     | 032413 | 0920 | SE        | WIER 2 after rain event.   |
| 251     | 032413 | 1031 | SSE       | CR 34 culvert after rain<br>event — 26                                       |
| 252     | 032413 | 1032 | NW        | CR 34 culvert after rain<br>event. — 26                                      |
| 253     | 032413 | 1128 | E         | Detention pond after rain event  |
| 254     | 032413 | 1128 | E         | Stained area E of detention pond   |
| 255     | 032413 | 1151 | SW        | Beaver Dam after rain event  |
| 256     | 032413 | 1151 | SE        | Beaver Dam after rain event  |
| 257     | 032413 | 1413 | NE        | RP Contractor hauling debris in<br>Washng Creek bank in Zone 2B              |
| 258     | 032413 | 1418 | SE        | on   |

03.24.13

tg 21 West 0002 04 2-13 205

2036 START McCarthy sent EPA OSC  
MHayes a text with today update  
on operations. — 26

03.25.13

36

tg 2 Weston 0002042-13005

0755 START D McCarty and T Gomez depart to Lion Oil Magnolia Spill. Health and Safety see page 5.

Weather: Currently - 28°F clear NNE winds

0 mph. Today - mostly clear Hi 54°F NW

winds 15-30 mph w/gusts up to 30 mph.

Physical Hazards: Slick ground due to frost.

To: Gomez To Day

0808 START arrive on site & scan in.

0810 START depart to CR 34 culvert.

0816 START arrives at CR 34 Culvert.

LATE ENTRY 0738 RP John Warren sent an email to START D McCarty providing 1003 tank spill recovery inventory

| date     | gauge | total | oil  | water | recovery | total | recovery | rate |
|----------|-------|-------|------|-------|----------|-------|----------|------|
| 03.25.13 | 8.17  | 6941  | 5306 | 1635  | 2905     | 11093 |          |      |

\* Oil volumes gross... not corrected for temp., gravity or BS & W.

RP J Warren stated they will haul 3 to 4 more loads of water to refinery today. Will catch samples on first & last load.

0830 Calibration of mwh PTE 23767

Fresh Air Cal - Pass on all sensors

4 Gas ( $\text{CO}_2$ ,  $\text{CH}_4$ ,  $\text{H}_2\text{S}$ ,  $\text{O}_2$ ) Air Gas Lot# LMW-406-3

Isobutylene ( $\text{C}_4\text{H}_8$ ) 100 ppm Air Gas Lot# BAN-348-100-22

D mwh for TG

03.25.13

37

tg 2 Weston 0002042-13005

O<sub>2</sub> 18% : 18 pass

CO 55ppm: 50 pass

LEL 50%: 49 pass

H<sub>2</sub>S 25ppm: 25.2 pass

VOC's 100ppm: 100.1 pass

0849 START departs to WIER 2.

0857 START arrives at WIER 2. IC, Situation, & ADEQ Chris Voss with TAS Contractor doing oversite of LCB. START discusses with IC G Gater transition with ADEQ and boom maintenance along the entire spill area. Informed IC START's last day on site is tomorrow. START suggested to begin electronic documentation of daily incident documentation from IC. START discussed with ADEQ

Voss, he stated he looked at June 1C & thought it looked good & June 3C still needed work and boom maintenance. He will be back on site 0328.13 to do oversight on the entire spill area. ADEQ is discussing with RP staff reduction may come as early as 03.29.13, but will discuss DPA/CST for T6

38 03.25.13

tg 2/20/0002 042-13-05

more on Thursday 03.28.13. At this time ADEQ is not going to require black staining off trees to be removed.

0950 START departs WIER2.

1000 START arrives at small culvert heading to WIER 1. OM1 contractor washing & boom maintenance. →  
1040 START arrives at WIER1. South bank completed. LOT1 crew working on north bank scraping bank to remove saturated soil & repair bank to a natural shape. Soil removed placed on Vacqueen on south bank. Soft boom placed down stream to capture oil leaking from bank. →

1150 START depart to Yellow Tree Road.

1153 START arrives at Yellow Tree Road. VAC truck not present. Skinner removed from creek. Noticable moderate slug of oily debris at location pointed. Trees over top hanging more. →

1159 START departs Yellow Tree Road.

1205 START arrived at Large Culvert.

No VAC truck or skimmer. Small Ditch for TG

03.25.13

tg 2/20/0002 042-13-05

Oily debris slug at boom area. Crew just upstream of Large Culvert debris removal & washing bank behind. Hard boom & soft out. →

1211 START depart Large Culvert. →

1215 START arrive at Big house Road. No VAC truck or skimmer. Hard boom & soft boom out on <sup>east</sup> ~~west~~ side of culvert.

1230 START departs 3 Bighouse Road.

1223 START arrives at Stepping area. Head to ~~Beaver Dam area~~. →

1pm 1B, J Kristie crew working on <sup>only</sup> debris & leaf litter removal along the banks. Another crew will come in behind & wash banks either today or tomorrow. →

1255 START departs for lunch. →

1350 START arrived on site, arrived at Stepping area. START begins at right of way working (walking) upstream. Doodle Buggy skinning any oil coming downstream at right away. Area still heavily saturated. 1pm 1B - Crews scrubbing, racking, & washing. 1pm 1A - continuing washing DPMCT for TG. →

Alt location

40 03.25.12

to 2/Weston ~~0003-042~~-13805

On South end. Boom has been pulled as well as skimmers. Approximately (2) crew members in total working Zone 1B & (7) in Zone 1A.

1525 START departs for Big House Road & walk Zone 1A.

1528 START arrives at big house road. Begin walking zone.

(3) ACME Crew & TAS Crew brush clearing, (2) ACME crews washing & working. Other crew members downstream removing fallen trees.

1710 START departs Big House Road.

1712 START arrives at Staging area to work on documentation. MultiRAE VOCs, H<sub>2</sub>S, CO, & ELEL continuously read 0.0 and O<sub>2</sub> 20.9 all day.

1820 START departs Staging.

1822 START scans out and departs site.

1825 EPA OSC MH Augs called START DMCarty for update on activities.

He requested to draft a pol-report he is releases START Wednesday 03.27.13 DMCAT for TG

03.25.12

to 2/Weston ~~0003-042~~-13805

morning.

1845 START arrives at hotel. Unload equipment. Will continue documentation. Photos: photographer to witness dm

| photo | date     | time | direction | description   |
|-------|----------|------|-----------|---|
| 269   | 03/25/13 | 1003 | W/E       | Small Culvert on way to WIERI   |
| 270   | 03/25/13 | 1009 | E/W       | Small Culvert on way to WIERI   |
| 271   | 03/25/13 | 1050 | NW        | WIERI to decommission.  |
| 272   | 03/25/13 | 1102 | SW        | S bank completed to natural state. N bank being worked on. Contaminated soil stack piled on S bank from WIERI |
| 273   | 03/25/13 | 1216 | S         | Big House Road location   |
| 274   | 03/25/13 | 1216 | E         | Big House Road location   |
| 275   | 03/25/13 | 1241 | SE        | Debris removal from Zone 1B at new culvert  |
| 276   | 03/25/13 | 1244 | W         | New culvert in Zone 1B  |
| 277   | 03/25/13 | 1250 | NW        | Equipment clean area at Staging.  |
| 278   | 03/25/13 | 1435 | W         | Crewsacking debris in Zone 1A.  |
| 279   | 03/25/13 | 1602 | E         | START contractor taking GPS coordinate at unnamed creek   |
| 280   | 03/25/13 | 1604 | SE        | & LCB   |
| 270   | 03/25/13 | 1604 | SE        | Crew member washing in zone 2A.   |

41

42 03.26.13

tg 2/West ~~0002~~ 042-13005

0745 START DMcCarty and TGamey depart to Lion Oil Magnolia Spill. Health & Safety See page 5.

Weather: Currently - 39°F wind chill 34°F Winds WNW 4 mph. Today - Sunny then mostly clear. Hi 52°F NW winds 5-10 mph  
Physical Hazards: Staying focus, slips trip falls, diving. ~~D.McCarty~~ ~~T Gamey~~ ~~To Dry~~

0759 START arrived on site at Command Center.

0814 Morning Briefing

- Day 18 of response

- NOI - hyper extended knee went by to walk.

- Weather

- OPS - Washing & debris efforts will continue from last 48 hrs. Division

JA-3B pockets found yesterday will be worked again today.

Washing efforts in Beaver Dam area continue oil in sandy loam is heavy. Some 1B debris removed washing to collection points using Double Buggy. TAS requested to start using retention pond water DMCIT for TG

03.26.13

tg 2/West ~~0002~~ 042-13005

Starting today Once metal rebar's come in can haul waste. (4) roll of boxes size worth of debris has been collected and waiting ~~for~~ to be placed in rail cars. Hauling debris w/ skidsteers & ATVs. Scale down crew by Friday. A skeleton crew over weekend. In discussions how big skeleton crew will be. Assessment Thursday & Friday (03.28-03.13). Continuing demolition equipment.

0822 Meeting concluded.

0838 START depart to CR 3+1 culvert

0837 START arrives at CR 3+1 culvert. OM&T crew on site replaced booms.

0840 Calibrate of Fresh Air & Bump Test of mult RAE 23767.

Fresh Air Cal - Pass on all sensors

4 gas ( $\text{CO}$ ,  $\text{CH}_4$ ,  $\text{H}_2\text{S}$ ,  $\text{O}_2$ ) Air Gas Lot # LAM-4063

Isobutylene ( $\text{C}_4\text{H}_8$ ) 100 ppm Air Gas Lot # BAN-248-100-22

$\text{O}_2$ : 18.1%

$\text{CO}$ : 49 ppm

LEL: 46%

$\text{H}_2\text{S}$ : 24.3 ppm

VOCs: 101.1 ppm

DMCIT for TG

Rite in the hole

43

44 03.26.13

tg 2 Westnecos - 042-13-05  
0915 START departed CR 34 Culvert  
0920 START arrived at WIER 2. —  
Observed two areas where  
the creek overtopped bank. Oil  
deposits are ~~soft~~ apparent in these  
areas. (1) area is upstream of WIER 2  
on south side and (1) area is further  
upstream ~100 yds ~~near~~ at the  
sandbag area. LC3 relieved its pressure  
during the rain event when WIER 1  
broke on 03.23.13. —

1044 START departs WIER 2. —  
1050 START arrives at WIER 1. LOTT  
crew laying grass mats along junction  
creek bank. OII crew was in upstream  
again today. LOTT will be putting free  
tank out & repairing the area. —  
1127 START departs WIER 1 location. —

1140 START arrives at Yellow Tree Road  
Crews continue to wash from  
upstream of yellow Tree Road and  
downstream of yellow Tree Road. —  
1155 START departs Yellow Tree Road.

1159 START arrives at Large Culvert.  
(2) crew members blowing oil down  
2.8m<sup>2</sup> for T6. —

03.26.13

tg 2 Westnecos - 042-13-05  
Stream of Large Culvert. —  
1204 START departs Large Culvert  
1220 START arrived a Big House Road.  
No activities in area. —  
1227 Depart Big House Road. —  
1230 START departs for lunch  
1330 START arrived at ~~sight~~ site.  
Head to Staging area to work on  
documentation. —  
1535 START departs from staging  
to Pne IC by walking. —  
1537 Incident Command at Right of  
way when START arrived. All will be  
walking Pne IC. LOTT crew member stated,  
he turned the pump to begin <sup>pumping</sup> taking  
retention pond water from north pond  
at LOTT site. Pumping started ~1620.  
Pne IC moderate to heavy sheen  
visible and small pockets of oil.  
1628 START arrived at Staging area  
1630 START has all hands meeting  
1710 START continues documentation.  
1715 START TGaney departs to  
observe Beaver Pond operations. —  
START D McCarty will remain at  
DMIC for T6. —

Ramachan

45

46 0326.13

tg 260000Z 032-13-005

Staging Area To work on documentation  
1755 START D McCatty & T Gandy  
Meet up at Command Center for  
Briefing.

1759 Briefing

Day 18 of response

Situation - Weather 65°F, better tomorrow

Currently (117) personnel on site. Reduced resources, heavy equipment moving out more manual labor. 4 VAC trucks

Safety - Very good day. Speed on equipment

OPS - Productivity seems to be reducing.

Panel - Heavy portion still in 1A thru 1B. Still a lot debris removed from 1B-2C. Washing crew there are (4) (5+) crews for debris. The oil has not moved but seen today with warmer weather seen more movement. Washing all types. Will continue tomorrow, under cuts, eddies, & rockballs.

Dyne 2 - back & out (5) trailer load (~ 2 roll offs) etc. Dyne 1: Bagging & Shoring. Dyne 3 on final stretch crew will finish tomorrow.  
D M C (T) for TG

0326.13

47

tg 2/Weston 0000-042-13-005

1755 C: Finish debris removal & wash down. (2) loads of waste hauled to landfill <sup>WCA</sup> (in El Dorado)

1835 START signs out and departs Site.

1843 START arrives at hotel, unload equipment. Will continue documentation

LATE ENTRY 1755 MultiRAE VOCs, H<sub>2</sub>S, CO, ELEL continuously read 0.0 & O<sub>2</sub> 20.9 all day.

Photo log: photographer tg witness dm

| photo # | date   | time | direction | description  |
|---------|--------|------|-----------|--|
| 271     | 032613 | 0848 | NW        | CR 34 Culvert N side   |
| 272     | 032613 | 0849 | SE        | CR 34 Culvert S side   |
| 273     | 032613 | 0926 | SW        | WIER 2 location  |
| 274     | 032613 | 0926 | ESE       | WIER 2 location  |
| 275     | 032613 | 0929 | SW        | Staining on bank downstream WIER   |
| 276     | 032613 | 0929 | SW        | Staining on bank downstream WIER   |
| 277     | 032613 | 0940 | SE        | Oil area S of WIER 2, creek water  |
| 278     | 032613 | 0949 | W         | Oil area ~ 75 yds upstream of WIER 2, creek water went over bank during rain event |
| 279     | 032613 | 0953 | NW        | Boom area upstream of WIER 2   |
| 280     | 032613 | 0954 | SW        | Boom area upstream of WIER 2   |
| 281     | 032613 | 0956 | SW        | Boom area upstream of WIER 2   |

48 03.26.13

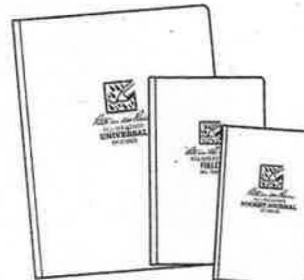
| tg  | date     | time | direction  | description   |
|-----|----------|------|------------|---|
|     | 2/26/13  | 0000 | 042-13-005 |   |
| 282 | 03/26/13 | 0956 | SE         | boom area further upstream of WIER                                      |
| 283 | 03/26/13 | 1114 | W          | former WIER 1 location  |
| 284 | 03/26/13 | 1116 | NE         | Former WIER 1 location  |
| 285 | 03/26/13 | 1130 | WSW        | Small culvert on way to WIER  |
| 286 | 03/26/13 | 1130 | E          | Small Culvert on way to WIER  |
| 287 | 03/26/13 | 1143 | SW         | Yellow Tree Road location   |
| 288 | 03/26/13 | 1143 | W          | Yellow Tree Road location   |
| 289 | 03/26/13 | 1201 | SW         | Large culvert location  |
| 290 | 03/26/13 | 1201 | E          | Large culvert location  |
| 291 | 03/26/13 | 1221 | S          | Big House Road location   |
| 292 | 03/26/13 | 1221 | SE         | Big House Road location   |
| 293 | 03/26/13 | 1539 | SE         | Right of Way location   |
| 294 | 03/26/13 | 1539 | W          | Right of Way location   |
| 295 | 03/26/13 | 1725 | E          | Bottom of Beaver Dam  |
| 296 | 03/26/13 | 1726 | SE         | Beaver Dam area.  |
| 297 | 03/26/13 | 1727 | SW         | Beaver Dam area.  |
| 298 | 03/26/13 | 1727 | SW         | Beaver Dam area   |
| 299 | 03/26/13 | 1727 | SW         | Beaver Dam area.  |
| 300 | 03/26/13 | 1729 | SE         | beginning of Beaver Dam (top)   |
| 301 | 03/26/13 | 1735 | S          | Upstream of Beaver Dam (unname)   |
| 302 | 03/26/13 | 1740 | ENE        | Initial spill area detention pond                                       |
| 303 | 03/26/13 | 1741 | S          | Covered & uncovered containment<br>Soil at LOTT site (initial spill)    |
| 304 | 03/26/13 | 1742 | E          | Covers Initial spill area.<br>Continue photolog in Logbook 4. DR for T6 |

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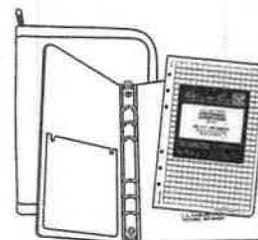
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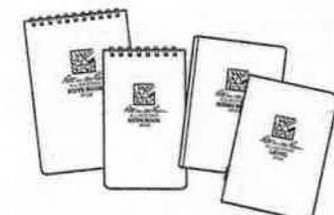
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JOURNAL**

Nº 391

Lion Oil Magnolia Spill

FPN: E13610

NRC No. 1040525

20406.012.002.0799.01

TDO No. ~~6002-10-13-05~~

2/Weston 042-13-005

Logbook 4 of 4

INCH



Name PTL David McCarty

Address 3900 Dallas Pkwy S #175  
Plano TX 75093

Phone 469.466.5500

Project Lion Oil Magnolia

TOD No. 34512-3012-1305

WON: 20406, 012, 0799, 12

EPA OSC Mark Hayes

CONTENTS

| PAGE | REFERENCE | DATE |
|------|-----------|------|
|------|-----------|------|

SCRIBE: Tori Gomey (Tg) Tod  
David McCarty (Dm) DSMC/DP

Fieldnotes

Field map: Logbook 1 pg 8-9

Logbook Reviewer: Hilary Gifford 6/18/13  
\_\_\_\_\_  
2013

<sup>2</sup> 03.26.13

to 2/Weston-042-13-005

Continue Photolog from Logbook 3.

| photo | date     | time | direction | description                  |
|-------|----------|------|-----------|------------------------------|
| 305   | 03.26.13 | 1742 | S         | Initial spill area LOTT site |
| 306   | 03.26.13 | 1742 | SW        | Initial spill area LOTT site |
| 307   |          | 1743 | NW        | North detention at LOTT site |
|       |          |      | to        | pump water from pond to      |
|       |          |      | to        | flush creek.                 |
| 308   | 03.26.13 | 1750 | N         | Hose from detention pond     |
|       |          |      | to        | to creek                     |
| 309   | 03.26.13 | 1753 | E         | Hose from detention pond     |
|       |          |      | to        | to creek.                    |

JMB  
X

03.26.13

<sup>3</sup>

2/Weston-042-13-005

0715 START DMcCarthy and TGarney depart for START office in Dallas, TX.  
0806 EPA OSC MHayes called START DMcCarthy for operations update. Discussion of TDS final update which OSC MHayes stated he will extend it to 09.2013. OSC MHayes will continue injection with ADEQ and keep in contact with START with future information. He may request another draft for the next update. The date is not set at this time.

1135 START DMcCarthy and TGarney arrive at START office. Will unload truck and continue documentation. New SCRIBE DMcCarthy, last entry TGarney. To Do my

Ron in the Rain

<sup>4</sup> 7/9/13  
Dm

1652 START Dm contacted George Garter with lion via cell phone to request an update of site progress. Mr. Garter stated he would call START Dm on 7/10/13 with update, but stated that site has transitioned over to a boom maintenance program with Code 3 Services as contractor.

~~D  
7/9  
13  
SA~~

<sup>2</sup> Weston-042-13-005

7/10/13  
Dm

1427 START Dm contacted George Garter for with Lion Oil for site followup information as Mr. Garter stated in a previous email. No answer. START Dm left messages.

(7/30) Mr. Garter returned phone call to START Dm & provided site update information. Mr. Garter stated the following:  
Currently LOTT is hauling rolloffs of debris, & PPE to WCA Union County Landfill in El Dorado AR. App 10 Rolloffs are currently onsite, delayed due to weather & bad roads w/ no 2 lane Hwy.  
Currently Hauling Soil to Republic Webster Parish Landfill in Minden LA.  
Sludge & Decon water will also be disposed of at Republic Webster Parish Landfill.

A Boom management Plan has been approved by ADEQ & will begin today. Code 3 Services is boom maintenance contractor. ADEQ Chris Voss was on site Thursday ADOTR Tuesday April 2nd D.S.M. 04/10/2013

6 4/10/13

DM

for site followup visit & approved the boom maintenance plan at that time. Mr. Voss is planning a site followup visit tomorrow, April 11th. Weir 2 is still in place but may be removed after next rain event & banks restored & reclaims. Update of work activities from 4 March 27 to date as follows: 3/27-7:30am - type of work as has been conducted on previous days to that point.

3/29 - Smaller skeleton crew for 3/29-3/31. Larger crew on standby if necessary.

3/30-3/31 - experienced an approximate 1.5 inch rain event at site during that period. Weir 2 held.

3/31 - Approximately 35 personnel onsite. Work included minor touch up & Bank Washing, & cleaning & demobbing equipment.

4/2 - A DFO Chris Voss onsite. Hard Boom in place. Boom maintenance plan finalized.

Q/H/S/T 4/10/13

2/Weston-042-13-005

4/10/13

DM

4/10/13 - Completed any active cleanup on creek. Planned to remove rest of equipment. Boom maintenance supplies arrived onsite. Landfill was closed due to heavy rainfall which caused roads & access to deteriorate. Lott worked to clean frac tanks. 4/10 - Boom Maintenance starting today as per plan & road continuing to ship waste offsite to designated landfills.

Additional soil that was removed other than contaminated soil in the included the portion of the historical spill that was south of the beaver dam area & was broken loose & became prey to off road vehicle traffic.

- Spill volume was increased to 5600 Barrels after further calculations.

Final Volume collected in Tank 1003 - 5359 Barrels of Grade oil from tank - W:1212 Tank 2114 Barrels  
Dated 4/10/13

2/Weston-042-13-005

Pete in the Rain

<sup>8</sup> 4/10/13  
dm

2/Weston-092-13-005

of crude collected from creek +  
3245 Barrels collected from  
station that did not leave Lion  
Oil Property. This volume does  
not include volume of oil collected  
in contaminated soil, contaminated  
debris + sorbent boom + pads, +  
does not account from any evaporation  
according to Mr. Gerten.

1500 Site followup phone called  
ended. Prior to call ending, Mr.  
Gerten stated he would email over  
the boom maintenance plan that  
was approved by ADFQ + work to  
gather up all remaining documentation  
requested by EPA + send it over to  
SMART DM. 8M.

X/10/13  
dm

5/14/13

dm

1020 SMART DM contacted Chris  
Voss with ADFQ via phone + left  
Mr. Voss a voicemail.

1330 ADFQ Chris Voss returned  
phone call. Mr. Voss stated site  
has been cleaned up, + the waste  
has been removed from the site.  
Mr. Voss also stated that

LOTT has hired Code 3 Services  
to implement a boom maintenance  
plan. Mr. Voss stated the last  
time ADFQ had conducted a  
boom maintenance plan site  
follow up visit was 4/25/13  
& ADFQ is still providing  
oversight to the remaining  
activities on site.

5/18/13  
dm

Rita in the Rain

10

6/10/13 2/Weston 042-13-005  
#30 SMART DM contacted George Garter via CP/11 to request additional information including How much soil was excavated? If HOTT has estimated how much oil was recovered from debris + soil + sorbent materials? SMART DM also requested air data from TADS for March 15-17th, 2013 which have not been received. SMART DM also stated requested additional CP/EH air data from post 14, later than March 19th. SMART has received data up to March 19th. SMART DM left message via voicemail.

D. Dr.  
6/10/13

11

6/11/13

2/Weston-042-13-005  
1311 SMART DM contacted George Garter via voice mail + left another message. 1446 SMART DM emailed Mr. Garter to request information listed on 6/10/13. 1448 Mr. Garter ~~replied~~ replied stating he would send the information to ~~the~~ SMART DM via ~~via~~.

D. Dr.  
6/11/13

Rita in the Room

12  
6/17/13 DM 2/Wester-042-13-00  
1115 START DM still has not —  
received information for from —  
requested on 6/10/13 & 6/11/13 —  
from George Garter. —

2/Wester-042-13-00

It is START DM still has not received information for from requested on 6/10/13 & 6/11/13 from George Garter.

6

6/14/13 (late entry) 2/Weston 042-13005  
1716 START Dr contacted John Warren with Lion Oil to confirm the name of the facility + the facilities capacity where the spill occurred. The ~~spill~~ facility name is the Magnolia Station + has a capacity of 200,000 barrels. The facility has 5 above ground storage tanks as follows:

25,000 barrels

85,000 barrels

55,000 base/s

30,000 barrels

5,000 barrels

Last Entries in  
Sediment

Business cards are  
important.

pages 44 - 7  
last (back)

## Log Book Log

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—

*Fig. 10. A. S. 10*

100

14

2/1

1000-10000 m<sup>2</sup> yr<sup>-1</sup>

1000 2000 3000 4000 5000 6000 7000 8000 9000 10000

Digitized by srujanika@gmail.com

~~Act in the River~~

QUESTION -042-13-005

14

6/18/2013

Recorder Hilary Gafford. This is the final  
page of logbook 4 of 4. Business cards on  
pages 44-48. Pages 15-43 intentionally blank.

END LOG Book ————— 200

15

Hilary Gafford  
6/18/13

44 3/26/13

TUESDAY - 042-13-005



Center for Toxicology and Environmental Health, L.L.C.

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D/M/14 3/26/13

3/26/13 21 Weston - 042-13-005

45

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D&M 14 3/26/13

Raven Schum

46

3/26/13  
Dm

2/Weston-042-13-005

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3/26/13

3/26/13  
Dm

2/Weston-042-13-005<sup>47</sup>

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OK M:W 3/26/13

Note on the Return

48

3/26/13  
DM

2hwest042-13205



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DSI mca 212 B/13

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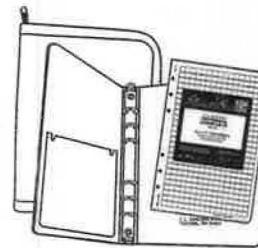
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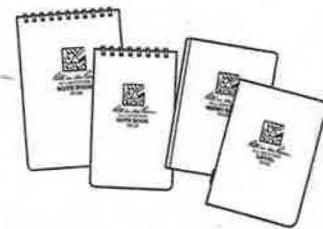
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**ATTACHMENT J**

**ADEQ Spill Reports**



ARKANSAS  
Department of Environmental Quality

## MEMORANDUM

**TO:** Enforcement Branch, Water Division  
Jason Bolenbaugh, Inspection Branch Manager, Water Division  
Kerri McCabe, Inspector Supervisor, Water Division

**FROM:** Chris Voss, Water Inspector, Inspection Branch

**cc:** Dean VanDerhoff, Emergency Response Coordinator  
Karla Schaeffer, Inspection Branch

**DATE:** March 22, 2013

**RE:** **Lion Oil Trading & Transportation (LOTT) - Crude Oil - ER#13-0169 (Update #1)**

---

On March 22, 2013, I checked on the site of the March 9<sup>th</sup> pipeline release by LOTT (Magnolia Station). I found the clean-up of the affected area was proceeding well with most of the oil recovered. TAS Environmental was still in charge of clean-up operations with Jason Wright in charge. Over 100 clean-up personnel were on site. Much of the debris removal and bank washing was done.

| Water Division No Discharge Industrial Photographic Evidence Sheet |  |           |    |  |                 |         |  |              |      |  |  |
|--|--|-----------|----|--|-----------------|---------|--|--------------|------|--|--|
| <b>Location:</b>   | LOTT Oil Spill # 13-0169 on tributary of Little Cornie Bayou in Columbia Co.         |           |    |  |                 |         |  |              |      |  |  |
| <b>Photographer:</b>   | Chris Voss   |           |    |  | <b>Witness:</b> | None    |  |              |      |  |  |
| <b>Photo No.</b>   | 1  | <b>Of</b> | 10 |  | <b>Date:</b>    | 3/22/13 |  | <b>Time:</b> | 8:22 |  |  |
| <b>Description:</b>  | Contingency pond   |           |    |  |                 |         |  |              |      |  |  |
|  |   |           |    |  |                 |         |  |              |      |  |  |
| <b>Photographer:</b>   | Chris Voss   |           |    |  | <b>Witness:</b> | None    |  |              |      |  |  |
| <b>Photo No.</b>   | 2  | <b>Of</b> | 10 |  | <b>Date:</b>    | 3/22/13 |  | <b>Time:</b> | 8:22 |  |  |
| <b>Description:</b>  | Same as above  |           |    |  |                 |         |  |              |      |  |  |
|  |  |           |    |  |                 |         |  |              |      |  |  |

| Water Division No Discharge Industrial Photographic Evidence Sheet                   |  |    |    |  |                 |         |              |      |
|--|--|----|----|--|-----------------|---------|--------------|------|
| <b>Location:</b>   | LOTT Oil Spill # 13-0169 on tributary of Little Cornie Bayou in Columbia Co. |    |    |  |                 |         |              |      |
| <b>Photographer:</b>   | Chris Voss   |    |    |  | <b>Witness:</b> | None    |              |      |
| <b>Photo No.</b>   | 3  | Of | 10 |  | <b>Date:</b>    | 3/22/13 | <b>Time:</b> | 8:40 |
| <b>Description:</b>  | Waste debris bagged on site  |    |    |  |                 |         |              |      |
|   |  |    |    |  |                 |         |              |      |
| <b>Photographer:</b>   | Chris Voss   |    |    |  | <b>Witness:</b> | None    |              |      |
| <b>Photo No.</b>   | 4  | Of | 10 |  | <b>Date:</b>    | 3/22/13 | <b>Time:</b> | 8:48 |
| <b>Description:</b>  | Drum skimmer 1   |    |    |  |                 |         |              |      |
|  |  |    |    |  |                 |         |              |      |

| Water Division No Discharge Industrial Photographic Evidence Sheet |  |           |    |  |                 |         |              |      |
|--|--|-----------|----|--|-----------------|---------|--------------|------|
| <b>Location:</b>   | LOTT Oil Spill # 13-0169 on tributary of Little Cornie Bayou in Columbia Co.         |           |    |  |                 |         |              |      |
| <b>Photographer:</b>   | Chris Voss   |           |    |  | <b>Witness:</b> | None    |              |      |
| <b>Photo No.</b>   | 5  | <b>Of</b> | 10 |  | <b>Date:</b>    | 3/22/13 | <b>Time:</b> | 8:49 |
| <b>Description:</b>  | Waste debris   |           |    |  |                 |         |              |      |
|  |   |           |    |  |                 |         |              |      |
| <b>Photographer:</b>   | Chris Voss   |           |    |  | <b>Witness:</b> | None    |              |      |
| <b>Photo No.</b>   | 6  | <b>Of</b> | 10 |  | <b>Date:</b>    | 3/22/13 | <b>Time:</b> | 9:24 |
| <b>Description:</b>  | Oil absorbent on bayou   |           |    |  |                 |         |              |      |
|  |  |           |    |  |                 |         |              |      |

| Water Division No Discharge Industrial Photographic Evidence Sheet |  |    |    |  |                 |         |              |      |
|--|--|----|----|--|-----------------|---------|--------------|------|
| <b>Location:</b>   | LOTT Oil Spill # 13-0169 on tributary of Little Cornie Bayou in Columbia Co.         |    |    |  |                 |         |              |      |
| <b>Photographer:</b>   | Chris Voss   |    |    |  | <b>Witness:</b> | None    |              |      |
| <b>Photo No.</b>   | 7  | Of | 10 |  | <b>Date:</b>    | 3/22/13 | <b>Time:</b> | 9:33 |
| <b>Description:</b>  | Same as above  |    |    |  |                 |         |              |      |
|  |   |    |    |  |                 |         |              |      |
| <b>Photographer:</b>   | Chris Voss   |    |    |  | <b>Witness:</b> | None    |              |      |
| <b>Photo No.</b>   | 8  | Of | 10 |  | <b>Date:</b>    | 3/22/13 | <b>Time:</b> | 9:37 |
| <b>Description:</b>  | Same as above  |    |    |  |                 |         |              |      |
|  |  |    |    |  |                 |         |              |      |

| Water Division No Discharge Industrial Photographic Evidence Sheet |  |           |    |  |                 |         |              |      |
|--|--|-----------|----|--|-----------------|---------|--------------|------|
| <b>Location:</b>   | LOTT Oil Spill # 13-0169 on tributary of Little Cornie Bayou in Columbia Co.         |           |    |  |                 |         |              |      |
| <b>Photographer:</b>   | Chris Voss   |           |    |  | <b>Witness:</b> | None    |              |      |
| <b>Photo No.</b>   | 9  | <b>Of</b> | 10 |  | <b>Date:</b>    | 3/22/13 | <b>Time:</b> | 9:49 |
| <b>Description:</b>  | Same as above  |           |    |  |                 |         |              |      |
|  |   |           |    |  |                 |         |              |      |
| <b>Photographer:</b>   | Chris Voss   |           |    |  | <b>Witness:</b> | None    |              |      |
| <b>Photo No.</b>   | 10   | <b>Of</b> | 10 |  | <b>Date:</b>    | 3/22/13 | <b>Time:</b> | 9:57 |
| <b>Description:</b>  | Clean-up of absorbent  |           |    |  |                 |         |              |      |
|  |  |           |    |  |                 |         |              |      |

# WASTE MANAGEMENT PLAN:

Lion Oil Trading & Transportation, Inc. (LOTT)  
600 Columbia 25 (CR25)  
Magnolia, AR 71753

**March 21, 2013**

Prepared by:

**Center for Toxicology & Environmental Health (CTEH®)**  
5120 Northshore Road  
North Little Rock, AR 72118

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| Center for Toxicology &<br>Environmental Health Project<br>Manager:          | James McCormack<br>(317) 473-0688 |
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| TAS Environmental<br>Project Manager:  | Jason Wright<br>(817) 304-4521    |

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### ATTACHMENTS

CRUDE OIL MSDS  
SITE DIAGRAM  
ADEQ APPROVAL LETTER  
WCA PROFILE  
UNIFORM HAZARDOUS WASTE MANIFEST  
WCA NON-HAZARDOUS WASTE MANIFEST

## **1.0 INTRODUCTION**

---

The purpose of this document is to describe Lion Oil Trading & Transportation, Inc. (LOTT) plan for management of waste streams generated as a result of site mitigation. Center for Toxicology & Environmental Health (CTEH®) has been retained to provide services which include but not limited to assisting with management of identifying and mitigation of any and all potential environmental impacts; community air monitoring; identify, characterize and disposal of all waste generated as a result of the event at its facility in Magnolia, AR which occurred on March 9, 2013.

This site-specific Waste Management Plan (WMP) describes the specific work tasks that are associated with the management of the waste listed at the site for the duration of this project. The plan outlines the basic tasks and establishes engineering controls that will be implemented to minimize risk to field personnel, the general public and the environment.

A separate Health & Safety Plan (HASP) will be amended, as necessary, if additional project tasks or hazards are identified during the scope of this project. CTEH® has developed this WMP in accordance with the regulations presented in the United States Environmental Protection Agency (USEPA), Department of Transportation, (USDOT) and Arkansas Department of Environmental Quality (ADEQ) regulations.

## 2.0 SITE DESCRIPTION

---

The LOTT project site is located at 800 Columbia 25, Magnolia, AR 71753, Latitude: 33.2405560 Longitude: -93.1469440. The facility acts as an Intermediate Gathering System site with a storage capacity of 170,500 barrels for crude oil collected from various oil wells in the area.

On Saturday, March 9, 2013, a release of crude oil (MSDS attached) occurred at the Magnolia, AR facility. Onsite and offsite areas were impacted by the release and will result in collection of materials for disposal.

A site diagram, which shows the location of the LOTT facility and the area of operations, is attached.

## **3.0 WASTE MANAGEMENT PLAN**

---

### **3.1 GENERAL WASTE MANAGEMENT BEST PRACTICES**

The following best practices must be followed in the management of wastes generated in a spill response effort:

- A. Dispose or manage wastes and recoverable materials in permitted or otherwise authorized locations and facilities only. Unauthorized disposal or management will not be tolerated.
- B. Reduce waste generation whenever practical. This is known as waste minimization or pollution prevention.
- C. Reuse or recycle materials whenever practical. This not only lowers consumption of raw materials; it also eliminates the need for waste disposal. Recycling and reuse of recovered oil and oily water is the preferred option.
- D. Avoid co-mingling wastes of different classifications. For example, never place non-hazardous wastes in the same container as hazardous waste. In addition, keep recyclable material separate from non-recyclable waste. It may be difficult or impossible to separate wastes after they are co-mingled.
- E. Maintain good housekeeping practices. Employees and contractors should maintain neat, clean work areas to reduce the need for additional clean up and the associated waste.
- F. Properly store wastes, especially hazardous wastes, to avoid releases to soil, water, or air, until they can be appropriately managed.
- G. Clearly identify waste containers. Use a label or other means to clearly identify the contents of containers of hazardous, non-hazardous and inert wastes.
- H. Document quantities and disposition of all hazardous and non-hazardous wastes as instructed in this plan. Waste tracking can help to manage costs and is required for all hazardous wastes. This information will be included in the final report developed at the conclusion of response activities.
- I. Recovered liquids (oil, water, sludge) should be collected and stored in as large a container as possible (USDOT approved drum, tote tank, tanker truck, barge, etc.) to maximize decanting potential, facilitate uninterrupted recovery, and to minimize equipment decontamination requirements.
- J. Communicate your ideas for waste minimization or waste management improvements to supervisors and fellow employees in different areas.
- K. Maintain security at all sites where waste is held.

## WASTE ANALYSIS & PROFILING:

All waste must be evaluated, characterized, profiled, and approved prior to being shipped off-site; this requirement applies to both RCRA Hazardous and RCRA non-hazardous waste. Currently, crude oil is the primary source of contamination for this project. The Incident Command Structure (ICS) group will advise the project management staff, first responders, hazardous materials technicians, operators, and ancillary personnel as to the specific hazards associated with the materials that may have to be managed as well as provide handling instructions of material being managed, specifically, as waste.

All materials may be evaluated utilizing generator knowledge, visual inspection, field test strips and laboratory analyses. Upon review of this information, waste management/ remedial personnel will begin to sort and separate the material into the appropriate category, whether it be hazardous waste (according to 40 CFR 261), non-hazardous waste, or off-spec and/or unused product; at this point the material will be containerized as is necessary and practical. Once separated and containerized, the formal waste characterization process will begin. Based on the advisement of the generator, technical staff, and onsite personnel, the appropriate disposal facility will be chosen and their respective waste analysis and sampling requirements will be followed.

## ANTICIPATED WASTE TYPES:

At this time, the following are the anticipated waste streams from the LOTT site based on information from the generator and emergency response personnel. This list shall not be considered inclusive and is subject to change as onsite personnel analyze the true extent of impact and remedial requirements:

1. Oily Debris (vegetation, misc. wood, plastic, metal, tyvek suits, gloves, boots, etc.).
2. Oily Soil (soil from excavations and stream embankment mitigation)
3. Oily Water (surface water collected during oil recovery)
4. Oily Decontamination Water (water used during equipment decontamination)
5. Household Waste (misc. plastic, paper, wood, cardboard, etc. not impacted with oil)

### **3.2 WASTE STREAM IDENTIFICATION AND COLLECTION**

The Incident Management Team (IMT) will have personnel on site at the generation point tracking all waste streams accumulated and transported to the designated final disposal site for the specific waste type. The IMT will implement a tracking system and method for onsite crews to properly segregate waste streams at the point of generation prior to removal. The subject methods include using designated minimum 6mm bags for segregated waste. IMT personnel onsite at the generation point will provide waste tracking logs to Waste

Management personnel so that proper space is made available on the receiving waste transport for acceptance of the waste generated.

### OILY LIQUID WASTE

Oily liquid waste (oily surface water & decontamination water) recovery from the relevant operations will be pumped into the appropriate USDOT approved portable containers and transported to the designated onsite storage tank #1003. The final offsite relocation for the oily waste is to be determined by the Responsible Party and IMT.

### OILY DECONTAMINATION LIQUID WASTE

Oily liquid decontamination waste (equipment cleaning water) recovery from the relevant operations will be pumped into the appropriate USDOT approved portable containers (totes and drums) and transported to the designated staging area. The final offsite relocation for the oily decontamination liquid waste is to be determined by the Responsible Party and IMT.

### OILY SOLID WASTE

Solid oily waste generated from response efforts will be addressed in one of three methods:

#### 1. OILY SOLID BAGGING IN THE FIELD

- A. Oily solid waste collected by crews will be stored in 6mm bags or equivalent, consolidated with other bags same material and transported to the designated storage area / container.
- B. If necessary, bags can be staged at approved areas at the work site on the shoreline until transport to the designated roll-off container is possible.
- C. Field personnel will load oily solids directly into lined roll-off containers at point of generation.
- D. Roll-off containers will be transferred to the onsite staging area to await offsite disposal.
- E. Prior to transport to offsite disposal facility, the soil will be placed in roll-off containers for over the road transportation.
- F. All containers used are to be lined with impermeable sheeting prior to loading.
- G. All roll-off containers will be covered with tarps during storage and transportation.
- H. Field personnel will load oily solids directly into lined roll-off containers.
- I. Roll-off containers will be transferred to the onsite staging area to await offsite disposal.

## 2. DIRECT LOAD-OUT IN THE FIELD

- A. All roll-off containers used are to be lined with impermeable sheeting prior to loading.
- B. Field personnel will load oily solids directly into lined roll-off containers at point of generation.
- C. Roll-off containers will be transferred to the onsite staging area to await offsite disposal.
- D. Prior to transport to offsite disposal facility, the soil will be placed in roll-off containers for over the road transportation.
- E. All containers used are to be lined with impermeable sheeting prior to loading.
- F. All roll-off containers will be covered with tarps during storage and transportation.
- G. Field personnel will load oily solids directly into lined roll-off containers.
- H. Roll-off containers will be transferred to the onsite staging area to await offsite disposal.

## 3. STOCKPILE AND LOAD-OUT IN THE FIELD

- A. Excavated soil may be placed into temporary stockpiles prior to load out for transportation to an offsite disposal facility.
- B. Soil stockpiles will have 6-mil poly sheeting placed on the ground prior to stockpiling material.
- C. Once stockpiling is completed or at the end of each day, the stockpiles will be covered with 6-mil poly sheeting.
- D. Prior to transport to offsite disposal facility, the soil will be placed in roll-off containers for over the road transportation.
- E. All containers used are to be lined with impermeable sheeting prior to loading.
- F. All roll-off containers will be covered with tarps during storage and transportation.
- G. Field personnel will load oily solids directly into lined roll-off containers.
- H. Roll-off containers will be transferred to the onsite staging area to await offsite disposal.

## 4. HOUSEHOLD WASTES

Household waste will be bagged and transferred to the designated roll-off container. Roll-off containers will be staged awaiting offsite disposal.

All approved waste containers will be labeled in accordance to federal transport regulations.

### 3.3 WASTE TRACKING AND DOCUMENTATION

The generation and tracking of the waste will be documented by several means:

1. Waste Tracking Sheet – a waste tracking sheet will be utilized to track the quantity, location and disposition of the various waste streams generated.
2. Hazardous Waste Manifests – a hazardous waste manifest will be utilized for the off-site shipment of any hazardous waste generated.
3. Bill of Lading – a bill of lading will be used

### 3.4 ANALYTICAL/APPROVAL PROCESS

A representative sample will be taken and sent to Ana-Lab Corp. which is a National Environmental Laboratory Accreditation Conference (NELAC) accredited and Arkansas Department of Environmental Quality (ADEQ) certified laboratory and / or Lion Oil Refining's lab (where required) for analysis.

#### ANALYSES TO BE PERFORMED

The analyses that will be performed to characterize the waste may include but are not limited to:

Oily Solid Wastes (Soil, Debris, Absorbents, etc.):

TCLP SVOCs  
TCLP VOCs  
TCLP Metals  
Ignitability  
Reactive Sulfides  
Reactive Cyanides  
Corrosivity

Oily Liquid Waste:

Oil & Grease  
Total Organic Carbon  
pH

Oily Decontamination Liquid Wastes (equipment cleaning liquids, etc.):

TCLP SVOCs  
TCLP VOCs  
TCLP Metals  
Ignitability  
Reactive Sulfides  
Reactive Cyanides  
Corrosivity

Municipal solid Waste

No analyses required.

## WASTE CHARACTERIZATION SAMPLING FREQUENCY

The following is an outline of the frequency of sampling to characterize the wastes generated.

Oily Solid Wastes (Soil, Debris, Absorbents, etc):

1 composite sample for every ten (10) roll-off containers.

Oily Liquid Waste:

2 grab samples collected each day from the onsite storage Tank #1003.

## **3.5 WASTE STORAGE, TRANSPORTATION & DISPOSAL**

### ANTICIPATED WASTE CONTAINERS:

Based on the anticipated waste streams mentioned previously, the follow are the anticipated waste containers to be utilized at the site. This list shall not be considered all-inclusive and is subject to change based on field requirements:

55-gallon drum – contaminated debris, soil and waters

Steel or poly totes – contaminated waters

Frac tank – contaminated waters

Vacuum tanker – contaminated water

Roll-off containers – contaminated soil and debris, trash

### TRANSPORTERS:

The following is a list of licensed transporters that may be utilized to transport materials from the LOTT site to approved treatment, disposal, and storage facilities. This list shall not be deemed inclusive and may change as onsite personnel obtain more information:

TAS Environmental

6409 W. 7<sup>th</sup> St.

Texarkana, TX 71753

(870) 814-4350

EPA ID#: TXR000061283

Service Offering: Roll-off rental and transport, Semi-trailer, Wet/dry Vac Truck, Vacuum Tanker.

Hydrostatic Testing Services, Inc.

PO Box 2

Magnolia, AR 71754

US DOT #: 657076

Service Offering: Vacuum Tanker services for non-hazardous oily liquids.

### DISPOSAL FACILITIES:

The following are a list of anticipated waste disposal facilities that may be utilized to handle material generated at the LOTT site/event. This list shall not be deemed inclusive and is subject to change based on site observations and material generated:

Union County RDF  
3083 Smackover Highway  
El Dorado, AR 71730  
(870) 725-3821

MSW Permit #: 248-F1-R4

Service Offerings: Landfilling of acceptable non-hazardous wastes streams:  
MSW, C&D, Industrial Waste, Special Waste and Liquid Waste.

Webster Parish Landfill (Republic Waste)  
493 Landfill Road  
Minden, LA 71058  
(318) 377-9193

LDEQ Permit #: P-0165

Service Offerings: Landfilling of acceptable non-hazardous wastes streams:  
MSW, C&D, Industrial Waste, Special Waste and Liquid Waste.

Lion Oil Refining  
1000 McHenry St.  
El Dorado, AR 71730  
NPDES Permit #: AR0000647  
(870) 862-8111

Service Offerings: Wastewater treatment of oily water collected from the LOTT Magnolia, AR event. ADEQ approval letter is attached.

### WASTE DOCUMENTATION:

Attached are samples of proper waste characterization and shipping, and disposal documentation:

- 1) WCA Waste Characterization Report (Profile)
- 2) Uniform Hazardous Waste Manifest
- 3) WCA Non-Hazardous Manifest

### **3.6 RECORD KEEPING**

#### CONTAINER LOG

A container log will be developed to track characterization activities for each container assigned an identification number. An electronic version of the form will be updated daily and will serve as the master copy. A sample of the form is provided in Appendix A. Separate container log forms will be kept for each area.

## DAILY REPORT

A daily report by the professional managing data collection will be prepared following each work day. The report will identify active subcontractors and a summary of work conducted during the day.

## MANIFESTS

CTEH® will manage all manifests for the site. The manifest number will be identified on the Container log when appropriate.



## **CRUDE OIL MSDS**

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# Lion Oil Company

Product: Crude Oil

Revision No. 7



MSDS No. LO0018

Date of Preparation: 6-08-09

## Section 1 - Chemical Product and Company Identification

Product/Chemical Name: Crude Oil

Chemical Formula: Mixture

CAS Number: 8002-05-9

Synonyms: Crude, Sweet Crude, Sour Crude

Description: Amber to black viscous liquid with a mild sulfur odor.

Manufacturer or Distributor: Lion Oil Co., 1000 McHenry St., El Dorado, AR 71730; (870) 862-8111

24-hr Emergency Phone Number: "FOR CHEMICAL EMERGENCY" Spill, Leak, Fire, Exposure or Accident

CALL CHEMTREC – Day or Night 800-424-9300

MSDS CONTACT: Beverly McFarland – 870-862-3703

## Section 2 - Hazards Identification

### ★★★★★ Emergency Overview ★★★★★

DANGER!

Health  
Flammability  
Physical Hazard

Volatile and Flammable Liquid

Keep away from ignition sources. Crude oil vapors are heavier than air and may travel some distance to an ignition source and flash back.

Contains Benzene - long term, prolonged or repeated skin contact may increase the risk of skin cancer, blood and nervous system damage.

May contain hydrogen sulfide gas (H<sub>2</sub>S).

**HARMFUL OR FATAL IF SWALLOWED** – Can enter lungs and cause damage.

May cause eye and skin irritation.

Spills may create a slip hazard.

| HMIS             |    |
|------------------|----|
| H                | 1* |
| F                | 4  |
| PH               | 0  |
| PPE <sup>†</sup> |    |
| †Sec. 8          |    |

### ★★★★★ Potential Health Effects ★★★★★

Primary Entry Routes: Inhalation, Skin Absorption, Ingestion, Skin and/or Eye contact.

Target Organs: Eyes, Skin, Respiratory System, Central Nervous System, Liver, and Kidneys

Carcinogenicity: Contains Benzene which has been designated a carcinogen by IARC (group 1), NPT, and OSHA.

Medical Conditions Aggravated By Long-Term Exposure:

Benzene – Individuals with liver disease may be more susceptible to toxic effects.

Hexane – Individuals with neurological disease should avoid exposure.

Petroleum Hydrocarbons – Skin contact may aggravate an existing dermatitis.

#### Acute Effects

**Inhalation:** Inhalation causes irritation of mouth, throat, and respiratory tract. Can cause headaches, dizziness, drowsiness, convulsions, coma, cyanosis and generalized depression. Large amounts in lungs could cause chemical pneumonitis, which can be fatal. This material may contain hydrogen sulfide (H<sub>2</sub>S) which has rotten – egg odor.

Continued exposure to H<sub>2</sub>S may deaden a person's sense of smell. If the rotten – egg odor has stopped, this may not mean that H<sub>2</sub>S is no longer present. High levels of H<sub>2</sub>S can cause shock, convulsions, coma, and death.

**Eye:** Eye contact causes tearing, redness and severe irritation.

**Skin:** Skin contact from prolonged or frequent exposure to liquids or vapors can cause irritation and dermatitis.

**Ingestion:** Do Not Induce Vomiting because of danger of aspirating liquid into lungs. May be harmful or fatal if swallowed. Ingestion can cause blurred vision, vertigo, vomiting and cyanosis. Seek medical attention.

#### Chronic Effects

Benzene has been classified as a leukemogen and may produce anemia, leukemia from repeated or prolonged exposure to high concentrations.

Section Ref. (10)

### Section 3 - Composition / Information on Ingredients

| Ingredient Name         | CAS Number | % wt     |
|-------------------------|------------|----------|
| Crude oil, including:   | 8002-05-9  | 100      |
| Benzene                 | 71-43-2    | 0.1-1.5  |
| Toluene                 | 108-88-3   | 0.1-1.5  |
| Xylenes (mixed isomers) | 1330-20-7  | 0.1-1.5  |
| Cyclohexane             | 110-82-7   | 0.01-0.5 |
| Ethylbenzene            | 100-41-4   | 0.01-0.5 |
| Hexane                  | 110-54-3   | 0-3.0    |
| Trimethylbenzene        | 95-63-6    | 0-0.2    |
| Naphthalene             | 91-20-3    | 0-0.2    |
| Cumene                  | 98-82-8    | 0-0.2    |
| Hydrogen Sulfide        | 7783-06-4  | <0.001   |

### Section 4 - First Aid Measures

**Inhalation:** Move to fresh air. If overcome by vapor, remove from exposure and call a physician immediately. If breathing is irregular or has stopped, start resuscitation, administer oxygen, if available. Seek medical attention.

**Eye Contact:** Flush with water for 15 minutes. Contact doctor for additional advice.

**Skin Contact:** Remove any contaminated clothing and wash skin with soap and water, launder or dry-clean clothing before reuse.

**Ingestion:** Do not induce vomiting because of danger of aspirating liquid into lungs. Large amounts in lungs could cause chemical pneumonitis, which can be fatal. If spontaneous vomiting is about to occur, place victim's head below knees. Seek medical attention.

*After first aid, get appropriate in-plant, paramedic, or community medical support.*

Section Ref. (10)

### Section 5 - Fire-Fighting Measures

**Flash Point:** <0° F

**Flash Point Method:** TCC

**Autoignition Temperature:** 536° F (gasoline)

**LEL:** 1.4 %

**UEL:** 7.6 %

**Emergency Response Guide:** Guide No. 128

**Flammability Classification:** Flammable Liquid Class 1B

**Extinguishing Media:** Dry chemical, Halon, CO<sub>2</sub>, foam, water. Water may not be effective and water fog can be used to cool containers. Water may splash and spread flaming liquid.

**Unusual Fire or Explosion Hazards:** Keep away from heat, sources of ignition and strong oxidizers. Can react violently with oxidizing agents.

**Hazardous Combustion Products:** Fumes, smoke, carbon monoxide, sulfur oxides, and other decomposition products, in the case of incomplete combustion

**Special Fire-Fighting Procedures:** Vapors can readily form explosive mixtures with air. Heavier than air vapors can flow along surfaces to ignition sources and flash back. Used self-contained breathing in enclosed areas.

| NFPA rating® |   |
|--------------|---|
| H            | 1 |
| F            | 4 |
| R            | 0 |
|              |   |

Section Ref. (4, 10)

### Section 6 - Accidental Release Measures

**"FOR CHEMICAL EMERGENCY"** Spill, Leak, Fire, Exposure or Accident

CALL CHEMTREC – Day or Night 800-424-9300

**Spill/Leak Procedures:** Danger, Flammable, eliminate all ignition sources. Equipment used in spill cleanup must be grounded to prevent sparking.

**Small Spills:** Take up with an absorbent material and place in containers, seal tightly for proper disposal.

**Large Spills:** Isolate the hazard area and restrict entry to unnecessary personnel. Shut off source of leak only if it can be done safely or dike and contain the spill. Wear appropriate respirator and protective clothing. Water fog may be useful in suppressing vapor cloud, contain run-off. Remove with vacuum trucks. Soak up residue with sand or other suitable material, place in containers for proper disposal. Flush with water and dispose of flushing solutions as above. Local, state and federal disposal regulations must be followed.

Contact state and local environmental or health authorities. If spilled material could reach any surface waters, then notify The National Response Center (800) 424-8802.

**Regulatory Requirements:** This material or materials contaminated by crude oil may meet the criteria of a hazardous waste as defined by the EPA under RCRA or other state and local regulations. Analysis of the material may be needed to make a correct determination.

Section Ref. (4)

## Section 7 - Handling and Storage

**Handling Precautions:** Do not get in eyes, on skin or on clothing. Do not breathe vapors, mists or fumes. Wear protective equipment described in section 8 if exposure conditions warrant. Use only with adequate ventilation.

**Storage Requirements:** Keep away from open flame, high temperatures, sparks, pilot lights, static electricity, open flames and other sources of ignition. Store in well ventilated area. Store in tightly closed containers. Bond and ground containers during transfer of Crude Oil.

**Other Precautions:** Toxic amounts of Hydrogen Sulfide (H<sub>2</sub>S) may be present in storage tanks and bulk transportation vessels that have contained crude or still contain crude. **Do Not Enter these Compartments** until the Hydrogen Sulfide (H<sub>2</sub>S) level has been determined, and the proper exposure controls are in place to meet the exposure values listed in Section 8.

## Section 8 - Exposure Controls / Personal Protection

| Ingredient                 | OSHA PEL |         | ACGIH TLV                      |         | NIOSH REL |         | NIOSH IDLH            |
|----------------------------|----------|---------|--------------------------------|---------|-----------|---------|-----------------------|
|                            | TWA      | STEL    | TWA                            | STEL    | TWA       | STEL    |                       |
| Crude Oil                  | 500 ppm  |         | 5mg/m <sup>3</sup><br>oil mist |         | 350 ppm   |         | 1100 ppm              |
| Benzene                    | 1 ppm    | 5 ppm   | 0.5 ppm                        | 2.5 ppm | 0.1 ppm   | 1.0 ppm | 500 ppm               |
| Toluene                    | 200 ppm  | 300 ppm | 50 ppm                         |         | 100 ppm   | 150 ppm | 500 ppm               |
| Xylenes (mixed<br>isomers) | 100 ppm  |         | 100 ppm                        | 150 ppm | 100 ppm   | 150 ppm | 900 ppm               |
| Cyclohexane                | 300 ppm  |         | 300 ppm                        |         | 300 ppm   |         | 2000 ppm              |
| Ethylbenzene               | 100 ppm  |         | 100 ppm                        | 125 ppm | 100 ppm   | 125 ppm | 800 ppm<br>(10% LEL)  |
| Hexane                     | 500 ppm  |         | 50 ppm                         |         | 50 ppm    |         | 1100 ppm<br>(10% LEL) |
| Trimethylbenzene           | N. D.    |         | 25 ppm                         |         | 25 ppm    |         | N. D.                 |
| Naphthalene                | 10 ppm   |         | 10 ppm                         | 15 ppm  | 10 ppm    | 15 ppm  | 250 ppm               |
| Cumene                     | 50 ppm   |         | 50 ppm                         |         | 50 ppm    |         | 900 ppm<br>(10% LEL)  |
| Hydrogen Sulfide           |          | 20 ppm  | 10 ppm                         | 15 ppm  |           | 10 ppm  | 100 ppm               |

(LEL) – Lower Explosion Limit

### Engineering Controls

**Ventilation:** Provide explosion proof ventilation to meet TLV requirements in enclosed work areas.

### Protective Clothing/Equipment

**Gloves:** Use chemical resistant gloves to prevent skin contact.

**Goggles:** Wear chemical goggles if eye contact is likely.

**Respiratory:** Use organic vapor cartridge respirators for exposures over TLV up to 1000 ppm. Use fresh air or self-contained breathing equipment for unknown or high concentrations.

**Contaminated Equipment:** Launder or dry-clean contaminated clothing before reuse.

Section Ref. (2, 3)

### Section 9 - Physical and Chemical Properties

|  |  |
|--|--|
| <b>Physical State:</b> Liquid  | <b>Water Solubility:</b> Negligible      |
| <b>Appearance and Odor:</b> Amber to black viscous liquid with a mild sulfur odor. | <b>Other Solubilities:</b> No Data       |
| <b>Odor Threshold:</b> No Data   | <b>Boiling Point:</b> 0 – 1500° F        |
| <b>Vapor Pressure:</b> 1.5 – 9.0 psi @ 100° F                                      | <b>Freezing/Melting Point:</b> NA        |
| <b>Vapor Density (Air=1):</b> 3 - 4  | <b>Viscosity:</b> 1.0 – 400 cst @ 100° F |
| <b>Formula Weight:</b> No Data   | <b>Refractive Index:</b> No Data         |
| <b>Density:</b> No Data  | <b>Surface Tension:</b> No Data          |
| <b>Specific Gravity (H<sub>2</sub>O=1, at 4 °C):</b> 0.78 – 0.93                   | <b>% Volatile:</b> 25 – 95%              |
| <b>pH:</b> NA  | <b>Evaporation Rate:</b> No Data         |

### Section 10 - Stability and Reactivity

**Stability:** This Material is Stable.

**Polymerization:** Hazardous Polymerization will not occur.

**Chemical Incompatibilities:** Keep away from Oxidizing agents.

**Conditions to Avoid:** Keep away from open flame, high temperatures, and other sources of ignition.

**Hazardous Decomposition Products:** Fumes, smoke, carbon monoxide, sulfur oxides, and other decomposition products, in the case of incomplete combustion

### Section 11- Toxicological Information

**Carcinogenicity:** Contains Benzene, IARC known carcinogen to humans, rating 1  
Crude oil, IARC limited evidence in animals and inadequate evidence in humans, rating 3

**Chronic Effects:** Contains polynuclear aromatics (PAH's) which have been shown to cause skin cancer after prolong and repeated contact with the skin of test animals.

**Crude oil:**

**Skin-Mouse TDLo:** 3744 mg/kg/2Y-I: Carcinogenic effects

**Skin-Mouse TD:** 12,480 mg/kg/2Y-I: Carcinogenic effects

National Technical Information Service (Springfield, VA 22161) (Formerly U.S. Clearinghouse for Scientific and Technical Information) NTIS\*\* CONF-790334-3

**Skin-Mouse TD:** 40 g/kg/10W-I: Equivocal tumorigenic agent

British Empire Cancer Campaign Annual Report (Cancer Research Campaign, 2 Carlton House Terrace, London SW1Y 5AR, England) V.1- 1924-BECCAN 39, 420 , 61

**Skin-Mouse TD:** 21,216 mg/kg/2Y-I: Carcinogenic effects

**Skin-Mouse TD:** 210 mg/kg/2Y-I: Carcinogenic effects

National Technical Information Service (Springfield, VA 22161) (Formerly U.S. Clearinghouse for Scientific and Technical Information) NTIS\*\* CONF-801143

**Skin-Mouse TD:** 3744 mg/kg/2Y-I: Neoplastic effects

Journal of Occupational Medicine (American Occupational Medical Association, 150 N. Wacker Dr., Chicago, IL 60606) V.1- 1959-JOCMA 7 21,614,79

**Microsomal Mutagenicity Assay-Salmonella typhimurium** 1 mg/plate

Carcinogenesis (Information Retrieval, 1911 Jefferson Davis Highway, Arlington, VA 22202) V.1- 1980-CRNGDP 3, 21, 78

### **HYDROGEN SULFIDE (7783-06-4)**

**Inhalation-Rat LC50:** 444 ppm

Personal Communication from Mr. H.B. Lackey, Chemical Products Div., Crown Zellerbach, Camas, WA 98607, to Dr. H.E. Christensen, NIOSH, Rockville, MD 20852, June 9, 1978LacHB# 09JUN78

**Inhalation-Mouse LC50:** 634 ppm/1H

Aerospace Medical Research Laboratory Report. (Aerospace Technical Div., Air Force Systems Command, Wright-Patterson Air Force Base, OH 45433)AMRL\*\* TR-72-62,72

**Inhalation-Rat** TCLo: 20 ppm (female 6-22D post) Reproductive effects  
 Toxicology. (Elsevier Scientific Pub. Ireland, Ltd., POB 85, Limerick, Ireland) V.1- 1973-TXCYAC 6,389,90

**Inhalation-Human** LCLo: 600 ppm/30M

"Practical Toxicology of Plastics" Lefaux, R., Cleveland, OH, Chemical Rubber Company,  
 196829ZWAE -,207,68

**Inhalation-Man** LDLo: 5700 mg/kg: Central nervous system effects, Pulmonary system effects

Archives des Maladies Professionnelles de Medecine du Travail et de Securite Sociale. (Masson et Cie, Editeurs, 120 Blvd. Saint-Germain, P-75280, Paris 06, France) V.7- 1946-AMPMAR 44,483,83

**Inhalation-Human** LCLo: 800 ppm/5M

Tabulae Biologicae. (The Hague, Netherlands) V.1-22, 1925-63. Discontinued TABIA2 3,231,33

**Inhalation-Mammal** LCLo: 800 ppm/5M

Naunyn-Schmiedeberg's Archiv fuer Experimentelle Pathologie und Pharmakologie. (Berlin, Germany) V.110-253, 1925-66. For publisher information, see NSAPCCAEPPE 138,65,28

**Other human data for H<sub>2</sub>S:** It has been reported that 170 to 300 ppm is the maximum concentration that can be endured for 1 hour without serious consequences [Henderson and Haggard 1943] and that olfactory fatigue occurs at 100 ppm [Poda 1966]. It has also been reported that 50 to 100 ppm causes mild conjunctivitis and respiratory irritation after 1 hour; 500 to 700 ppm may be dangerous in 0.5 to 1 hour; 700 to 1,000 ppm results in rapid unconsciousness, cessation of respiration, and death; and 1,000 to 2,000 ppm results in unconsciousness, cessation of respiration, and death in a few minutes [Yant 1930].

Henderson Y, Haggard HW [1943]. Noxious gases, 2nd ed.; New York, NY; Reinhold Publishing Corp. pg 245  
 Poda GA [1966]. Hydrogen sulfide can be handled safely. Arch Environ Health 12:795800.

Yant WP [1930]. Hydrogen sulfide in industry: occurrence, effects and treatment. Am J Public Health 20:598608.

Section Ref. (5, 10)

## Section 12 - Ecological Information

**Aquatic Toxicity:** This material is toxic to aquatic organisms and should be kept out of all bodies of water.

If spilled material could reach any surface waters, then notify The National Response Center (800) 424-8802.

May be dangerous if it enters water intakes. Notify local health and pollution control officials.

Notify operators of nearby water intakes.

Section Ref. (10)

## Section 13 - Disposal Considerations

**Disposal:** Local, state and federal disposal regulations must be followed.

**Disposal Regulatory Requirements:** This material or materials contaminated by crude oil may meet the criteria of a hazardous waste as defined by the EPA under RCRA or other state and local regulations. Analysis of the material may be needed to make a correct determination.

**Container Cleaning and Disposal: "Empty" Container Warning:** "Empty" containers retain product residue (liquid and/or vapor) and can be dangerous. DO NOT PRESSURIZE, CUT, WELD, BRAZE, SOLDER, DRILL, GRIND, OR EXPOSE SUCH CONTAINERS TO HEAT, FLAME, SPARKS, STATIC ELECTRICITY, OR OTHER SOURCES OF IGNITION. THEY MAY EXPLODE AND CAUSE INJURY OR DEATH.

## Section 14 - Transport Information

### DOT Transportation Data (49 CFR 172.101):

The description shown may not apply to all shipping situations. Consult 49CFR, or appropriate Dangerous Goods Regulations, for additional description information.

**DOT Shipping Name:** Petroleum Crude Oil

**DOT Hazard Class:** 3

**DOT ID No.:** UN1267

**DOT Packing Group:** I

**Hazard Label:** Flammable Liquid

### Section 15 - Regulatory Information

**EPA Regulations:**

**RCRA Hazardous Waste Classification (40 CFR 261):** This material or materials contaminated by crude oil may meet the criteria of a hazardous waste as defined by the EPA under RCRA or other state and local regulations. Analysis of the material may be needed to make a correct determination.

**CERCLA Reportable Quantity (RQ) (40 CFR 302.4):**

| Compound                       | CAS Number | RQ   |
|--------------------------------|------------|------|
| Benzene                        | 71-43-2    | 10   |
| Toluene                        | 108-88-3   | 1000 |
| Xylenes (mixed isomers)        | 1330-20-7  | 100  |
| Cyclohexane                    | 110-82-7   | 1000 |
| Ethylbenzene                   | 100-41-4   | 1000 |
| Hexane                         | 110-54-3   | 5000 |
| Trimethylbenzene               | 95-63-6    | ---- |
| Naphthalene                    | 91-20-3    | 100  |
| Cumene                         | 98-82-8    | 5000 |
| Hydrogen Sulfide               | 7783-06-4  | 100  |
| Benzo(a)pyrene                 | 50-32-8    | 1    |
| Benzo(a)anthracene             | 56-55-3    | 10   |
| Dibenz(a,h)anthracene          | 53-70-3    | 1    |
| 3-Methylcholanthrene           | 56-49-5    | 10   |
| 7,12-Dimethylbenz(a)anthracene | 57-97-6    | 1    |
| Naphthalene                    | 91-20-3    | 100  |
| Biphenyl                       | 92-52-4    | 100  |
| Anthracene                     | 120-12-7   | 5000 |
| Benzo(rst)pentaphene           | 189-55-9   | 10   |
| Phenanthrene                   | 85-01-8    | 5000 |
| Benzo(g,h,l)perylene           | 191-24-2   | 5000 |
| Indeno(1,2,3-cd)pyrene         | 193-39-5   | 100  |
| Benzo(b)fluoranthene           | 205-99-2   | 1    |
| Fluoranthene                   | 206-44-0   | 100  |
| Benzo(k)fluoranthene           | 207-08-9   | 5000 |
| Benzo(a)phenanthrene           | 218-01-9   | 100  |

**SARA 311/312 Codes (40 CFR 370 / 29 CFR 1910.1200):**

|                   |     |
|-------------------|-----|
| Fire              | YES |
| Pressure          | NO  |
| Reactivity        | NO  |
| Immediate (acute) | YES |
| Delayed (chronic) | YES |

**SARA Toxic Chemical (40 CFR 372) Section 313:**
**Chemicals of Special Concern (40 CFR 372.28)\***

| Compound                | CAS Number | Concentration % |
|-------------------------|------------|-----------------|
| Benzene                 | 71-43-2    | 0.1-1.5         |
| Toluene                 | 108-88-3   | 0.1-1.5         |
| Xylenes (mixed isomers) | 1330-20-7  | 0.1-1.5         |
| Cyclohexane             | 110-82-7   | 0.01-0.5        |
| Ethylbenzene            | 100-41-4   | 0.01-0.5        |
| Hexane                  | 110-54-3   | 0-3.0           |
| Trimethylbenzene        | 95-63-6    | 0-0.2           |
| Naphthalene             | 91-20-3    | 0-0.2           |

|                                |           |          |
|--------------------------------|-----------|----------|
| Cumene                         | 98-82-8   | 0-0.2    |
| Hydrogen Sulfide               | 7783-06-4 | <10 ppm  |
| Benzo(a)pyrene                 | 50-32-8   | <50 ppm  |
| Benzo(a)anthracene             | 56-55-3   | <50 ppm  |
| Dibenz(a,h)anthracene          | 53-70-3   | <100 ppm |
| 3-Methylcholanthrene*          | 56-49-5   | <50 ppm  |
| 7,12-Dimethylbenz(a)anthracene | 57-97-6   | <24 ppm  |
| Naphthalene                    | 91-20-3   | 190 ppm  |
| Biphenyl                       | 92-52-4   | <240 ppm |
| Anthracene                     | 120-12-7  | 60 ppm   |
| Benzo(rst)pentaphene           | 189-55-9  | <50 ppm  |
| Dibenzo(a,h)pyrene             | 189-64-0  | <50 ppm  |
| Phenanthrene                   | 85-01-8   | 60 ppm   |
| Benzo(g,h,l)perylene           | 191-24-2  | <100 ppm |
| Dibenzo(a,l)pyrene             | 191-30-0  | <50 ppm  |
| Dibenzo(a,e)pyrene             | 192-65-4  | <50 ppm  |
| Indeno(1,2,3-cd)pyrene         | 193-39-5  | <100 ppm |
| 7,H-dibenzo(c,g)carbazole      | 194-59-2  | <24 ppm  |
| Benzo(b)fluoranthene           | 205-99-2  | <50 ppm  |
| Benzo(j)fluoranthene           | 205-82-3  | <50 ppm  |
| Fluoranthene*                  | 206-44-0  | <50 ppm  |
| Benzo(k)fluoranthene           | 207-08-9  | <50 ppm  |
| Benzo(a)phenanthrene           | 218-01-9  | <50 ppm  |
| Dibenz(a,j)acridine            | 224-42-0  | <24 ppm  |
| Dibenz(a,h)acridine            | 226-36-8  | <24 ppm  |
| Dibenzo(a,e)fluoranthene       | 5385-75-1 | <50 ppm  |
| 1-Nitropyrene                  | 5522-43-0 | <50 ppm  |
| 5-Methylchrysene               | 3697-24-3 | <50 ppm  |

Crude Oil may contain trace metals which are listed in section 313.

#### SARA EHS (Extremely Hazardous Substance) (40 CFR 355):

| Compound         | CAS Number | RQ  |
|------------------|------------|-----|
| Hydrogen Sulfide | 7783-06-4  | 100 |

**TSCA (40 CFR 710):** This product and its components are listed on the Toxic Substance Control Act (TSCA) Chemical Substance Inventory.

**State Regulations:** The following chemicals are specifically listed by individual states, for details on each states regulatory requirements you should contact the appropriate agency in that state.

| Compound                | CAS Number | States                               |
|-------------------------|------------|--------------------------------------|
| Benzene                 | 71-43-2    | CA, CA65, MA, NY, NJ, TX, FL, IL, PA |
| Toluene                 | 108-88-3   | CA, CA65, MA, NJ, TX, FL, IL, PA     |
| Xylenes (mixed isomers) | 1330-20-7  | CA, MA, NY, NJ, TX, FL, IL, PA       |
| Cyclohexane             | 110-82-7   | CA, MA, NJ, TX, FL, IL, PA           |
| Ethylbenzene            | 100-41-4   | CA, MA, NJ, TX, FL, IL, PA           |
| Hexane                  | 110-54-3   | CA, MA, TX, FL, IL, PA               |
| Trimethylbenzene        | 95-63-6    | MA, TX, FL, PA                       |
| Naphthalene             | 91-20-3    | CA, MA, NJ, TX, FL, IL, PA           |
| Cumene                  | 98-82-8    | CA, MA, NJ, TX, FL, IL, PA           |
| Hydrogen Sulfide        | 7783-06-4  | CA, MA, NJ, NY, FL, IL, PA, TX       |
| Crude Oil               | 8002-05-9  | MA, FL, PA, TX                       |

CA – CALIFORNIA STATE SUPERFUND HAZARDOUS SUBSTANCE  
 CA65 – CALIFORNIA PROPOSITION 65 CARCINOGENS OR REPRODUCTIVE TOXINS  
 MA – MASSACHUSETTS SUBSTANCE LIST  
 NY – NEW YORK HAZARDOUS SUBSTANCE BULK STORAGE LIST  
 NJ – NEW JERSEY RIGHT TO KNOW HAZARDOUS SUBSTANCE  
 TX – TEXAS AIR CONTAMINANTS WITH HEALTH EFFECTS SCREENING LEVEL  
 FL – FLORIDA TOXIC SUBSTANCE LIST  
 IL – TOXIC SUBSTANCE DISCLOSURE TO EMPLOYEES LIST  
 PA – PENNSYLVANIA HAZARDOUS SUBSTANCE LIST

Section Ref. (6)

## SECTION 16 - Other Information

**Prepared By:** Tommy Rowland – 6-8-09

**Revision Notes:** Moved Hazard Identification to Section 2 and Composition/ Information on Ingredients to Section 3.  
 Updated Sections 5, 11 and 16.

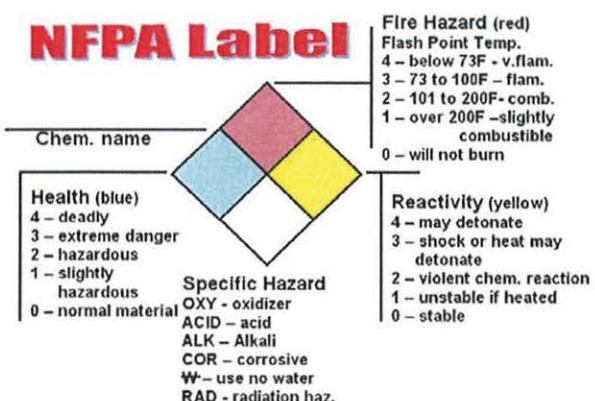
### Hazardous Materials Information System (U.S.A.)

| HMIS        |           |
|-------------|-----------|
| <b>H</b>    | <b>1*</b> |
| <b>F</b>    | <b>3</b>  |
| <b>PH</b>   | <b>0</b>  |
| <b>PPE†</b> |           |
| †Sec. 8     |           |

| Hazard Ratings |                      |
|----------------|----------------------|
| .....          | H – Health           |
| .....          | F – Fire Hazard      |
| .....          | PH – Physical Hazard |
| .....          | 4 – Extreme          |
| .....          | 3 – Serious          |
| .....          | 2 – Moderate         |
| .....          | 1 – Slight           |
| .....          | 0 – Minimal          |

\* **Chronic Hazard** - Chronic (long-term) health effects may result from repeated over exposure.

### National Fire Protection Association





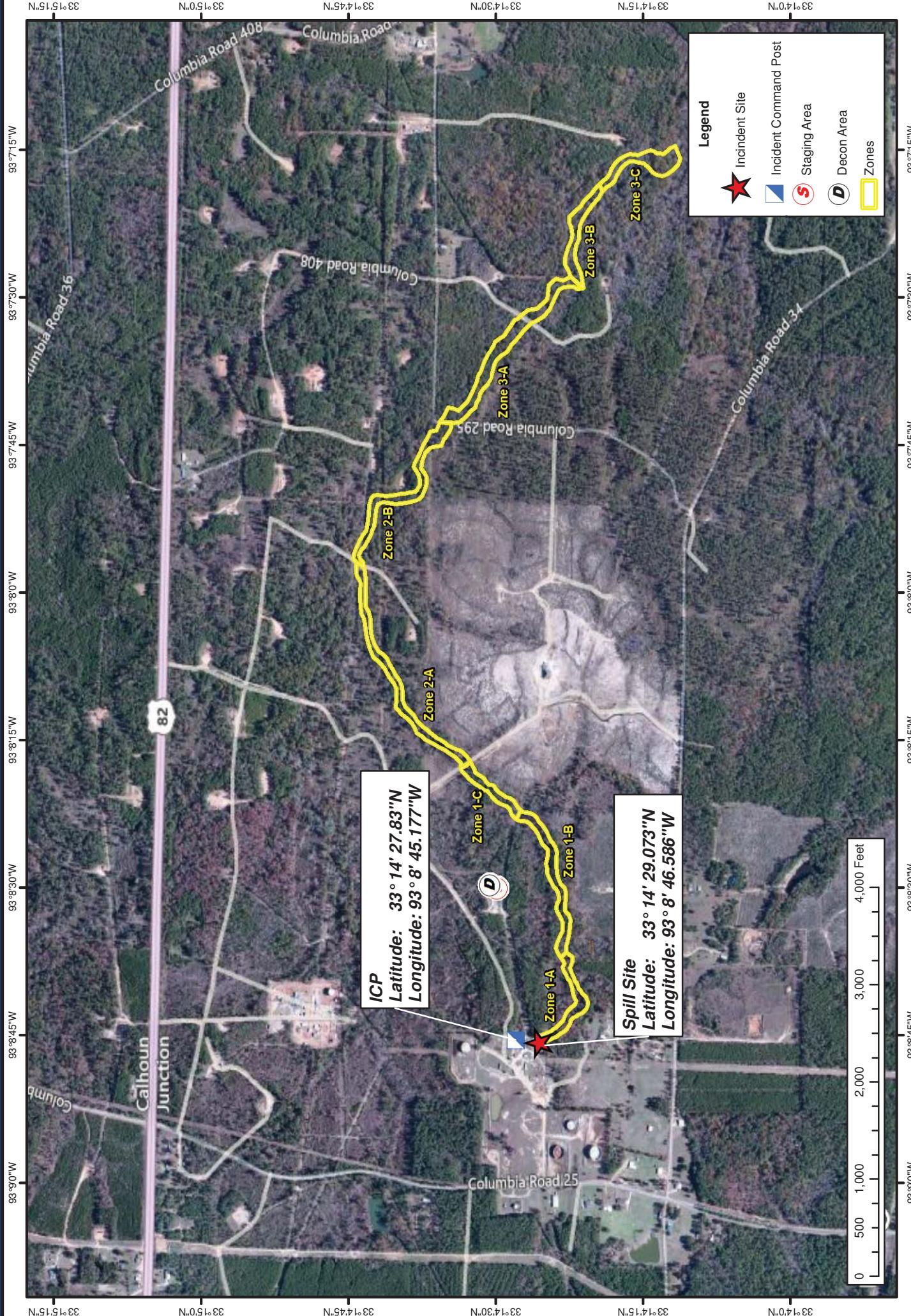
## **SITE DIAGRAM**

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# Magnolia Station Event Waste Management Plan Overview Map 03/20/13



Scale: 1:15,160





## **ADEQ APPROVAL LETTER**

## **Scott Kluska**

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**From:** George Garten <George.Garten@Lionoil.com>  
**Sent:** Wednesday, March 20, 2013 2:08 PM  
**To:** Scott Wiggins  
**Cc:** Scott Kluska  
**Subject:** FW: LOTT Collection Water Treatment - Follow-up

---

**From:** Shafii, Mo [SHAFII@adeq.state.ar.us]  
**Sent:** Monday, March 11, 2013 3:17 PM  
**To:** George Garten  
**Subject:** RE: LOTT Collection Water Treatment - Follow-up

My pleasure.

---

**From:** George Garten [<mailto:George.Garten@Lionoil.com>]  
**Sent:** Monday, March 11, 2013 3:16 PM  
**To:** Shafii, Mo  
**Subject:** RE: LOTT Collection Water Treatment - Follow-up

Thank you so much for your help in this matter.

Sincerely,

George Garten  
Senior Regulatory Specialist  
<mailto:George.Garten@DelekRefining.com>  
870.864.1453 (voice)  
870.864.1165 (fax)



---

**From:** Shafii, Mo [<mailto:SHAFII@adeq.state.ar.us>]  
**Sent:** Monday, March 11, 2013 3:14 PM  
**To:** George Garten  
**Cc:** Voss, Chris; Reiber, Loretta  
**Subject:** FW: LOTT Collection Water Treatment - Follow-up

Mr. Garten,

Based on the report made to the National Response Center, it is the Department's understanding that a spill of approximately 1500 barrels of crude oil occurred on March 9, 2013, at a tank farm called the Magnolia Station near Little Cornie Bayou. Based on your e-mail to the Department on March 11, 2013, approximately 6600 barrels (277,200 gallons) of contaminated water have been collected with additional contaminated water to be collected as the clean-up

efforts continue. It is also the Department's understanding that Lion Oil Company wishes to transport this water from the Magnolia Station to their El Dorado Refinery for treatment in the wastewater treatment plant.

The contaminated water consists of crude oil and stream water and is expected to contain parameters similar to those found in contaminated stormwater runoff. Contaminated stormwater runoff is already permitted to be treated in the wastewater treatment plant and discharged through Outfall 001 under NPDES Permit No. AR0000647. At a monthly average discharge rate of 2.09 MGD from Outfall 001, the contaminated water will be 11.7% of the discharge. Per your e-mail dated March 11, 2013, the wastewater treatment plant will be able to adequately treat the volumes of contaminated water.

Based on the Department's understanding outlined in the preceding paragraphs, a permit modification will not be required under 40 CFR 122.63 or Reg. 6.202. It is important to note that all terms and conditions of NPDES Permit No. AR0000647 must be met while the contaminated water is being treated and discharged.

If you have any questions, please contact Loretta Reiber, P.E. at [reiber@adeq.state.ar.us](mailto:reiber@adeq.state.ar.us) or by phone at (501) 682-0612.

Sincerely,

Mo Shafii,  
Assistant Chief  
Water Division

---

**From:** George Garten [<mailto:George.Garten@Lionoil.com>]  
**Sent:** Monday, March 11, 2013 1:21 PM  
**To:** Shafii, Mo  
**Subject:** FW: LOTT Collection Water Treatment - Follow-up

Mr. Shafii

LOTT needs to begin this process today. I will await an approval email from you to begin this process.  
Thanks again for your help.

Sincerely,

George Garten  
Senior Regulatory Specialist  
<mailto:George.Garten@DelekRefining.com>  
870.864.1453 (voice)  
870.864.1165 (fax)



---

**From:** George Garten  
**Sent:** Monday, March 11, 2013 12:11 PM  
**To:** 'shafii@adeq.state.ar.us'  
**Cc:** 'voss@adeq.state.ar.us'  
**Subject:** LOTT Collection Water Treatment

Mr. Shafii

Chris Voss of the Water Division requested that I send you an email regarding the activities at the LOTT Magnolia Station. The current amount of water that has been collected is approximately 6600 barrels. The plan is to transport the recovered water via truck to the El Dorado refinery for processing in the refinery wastewater treatment plant. This additional water will not have any adverse effects on the refinery wastewater treatment system. The activities at the Magnolia Station are still ongoing and additional water will be collected and transported with no operational issues for the wastewater treatment plant at the refinery. I would like to thank you and the staff at ADEQ for working with us during these adverse conditions. If you have any questions feel free to contact me via email or the phone number below.

Sincerely,

**George Garten**  
Senior Regulatory Specialist  
<mailto:George.Garten@DelekRefining.com>  
870.864.1453 (voice)  
870.864.1165 (fax)





## **WCA PROFILE**

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Requested Disposal Facility: El Dorado Landfill

Waste Profile #

ML-386

WCA Sales Rep:

Date:

**I. Generator Information**

|   |                            |             |                 |
|---|----------------------------|-------------|-----------------|
| Generator Name: Lion Oil                  |                            |             |                 |
| Generator Site Address: 600 Columbia 25   |                            |             |                 |
| City: Magnolia                            | County: Columbia           | State: AR   | Zip: 71753      |
| State ID/Reg No:                          | State Approval/Waste Code: |             | (if applicable) |
| Generator Mailing Address (if different): |                            |             |                 |
| City:                                     | County:                    | State:      | Zip:            |
| Generator Contact Name: George Garten     |                            |             |                 |
| Phone Number: (870) 614-4350              |                            | Fax Number: |                 |

**IIa. Transporter Information**

|  |                            |   |            |
|--|----------------------------|---|------------|
| Transporter Name: TAS Environmental              |                            | Contact Name: Michael R. White            |            |
| Transporter Address: 6409 W. 7 <sup>th</sup> St. |                            |   |            |
| City: Texarkana                                  | County: Bowie              | State: TX                                 | Zip: 75501 |
| Phone Number: (903) 838-8182                     | Fax Number: (903) 838-2184 | State Transportation Number: TXR000061283 |            |

**IIb. Billing Information**

|   |           |                              |                            |
|---|-----------|------------------------------|----------------------------|
| Bill To: TAS Environmental                |           | Contact Name: Bryan Bernethy |                            |
| Billing Address: 3929 California Pkwy. E. |           |                              |                            |
| City: Ft. Worth                           | State: TX | Zip: 76119                   | Phone Number: 817 636-7222 |

**III. Waste Stream Information**

|   |
|---|
| Name of Waste: Limbs, leaves and debris impacted with crude oil.  |
| Process Generating Waste: Cleanup of crude oil impacted debris from crude oil release from tank battery.  |
| Type of Waste <input type="checkbox"/> INDUSRTIAL PROCESS WASTE <input checked="" type="checkbox"/> POLLUTION CONTROL WASTE   |
| Physical State: <input checked="" type="checkbox"/> SOLID <input type="checkbox"/> SEMI SOLID <input type="checkbox"/> POWDER <input type="checkbox"/> LIQUID <input type="checkbox"/> OTHER: |
| Method of Shipment: <input checked="" type="checkbox"/> Bulk <input type="checkbox"/> Drum <input type="checkbox"/> Bagged <input type="checkbox"/> Other                                     |
| Estimated Annual Volume: CUBIC YARDS: 1000 TONS: GALLONS OTHER:   |
| Frequency: <input checked="" type="checkbox"/> ONE TIME <input type="checkbox"/> DAILY <input type="checkbox"/> WEEKLY <input type="checkbox"/> MONTHLY <input type="checkbox"/> OTHER        |
| Special Handling Instructions: none   |

**IV. Representative Sample Certification**

|  |   |   |
|--|---|---|
| Is the representative sample collected to prepare this profile and laboratory analysis, collected in accordance with U.S. EPA 40 CFR 261.20(c) guidelines or equivalent rules? |   | <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> NA |
| Sample Date: 3/14/13   | Type of Sample: <input checked="" type="checkbox"/> COMPOSITE SAMPLE <input type="checkbox"/> GRAB SAMPLE |   |
| Laboratory: Ana Lab  |   | Sample ID Numbers: T13-X031-3-14-1530   |
| Sampler's Employer: TAS Environmental  |   |   |

Waste Profile # ML386

| Characteristic Components |  | % by Weight (range) |  |  |  |
|---------------------------|--|---------------------|--|--|--|
| 1. Limbs and leaves       |  | 75                  |  |  |  |
| 2. Debris                 |  | 24                  |  |  |  |
| 3. Crude Oil              |  | 1                   |  |  |  |
| 4.                        |  |                     |  |  |  |
| 5.                        |  |                     |  |  |  |

|       |                                 |   |                 |            |                        |
|-------|---------------------------------|---|-----------------|------------|------------------------|
| Color | Odor (describe)<br>slight crude | Free Liquids<br><input checked="" type="checkbox"/> YES OR <input type="checkbox"/> NO<br>Content % | % Solids<br>100 | pH:<br>n/a | Flash Point<br>>140 °F |
| Brown |                                 |   |                 |            |                        |

| Attach Laboratory Analytical Report (and/or Material Safety Data Sheet) Including Required Parameters Provided for this Profile  |  |
|--|--|
| Does this waste or generating process contain regulated concentrations of the following Pesticides and/or Herbicides: Chlordane, Endrin, Heptachlor (and its epoxides), Lindane, Methoxychlor, Toxaphene, 2,4-D, or 2,4,5-TP Silvex as defined in 40 CFR 261.33? | <input checked="" type="checkbox"/> YES OR <input type="checkbox"/> NO |
| Does this waste or generating process cause it to exceed OSHA exposure limits from high levels of Hydrogen Sulfide or Hydrogen Cyanide as defined in 40 CFR 261.23?  | <input checked="" type="checkbox"/> YES OR <input type="checkbox"/> NO |
| Does this waste contain regulated concentrations of Polychlorinated Biphenyls (PCBs) as defined in 40 CFR Part 761?  | <input checked="" type="checkbox"/> YES OR <input type="checkbox"/> NO |
| Does this waste contain regulated concentrations of listed hazardous wastes defined in 40 CFR 261.31, 261.32, 261.33, including RCRA 6-Listed Solvents?  | <input checked="" type="checkbox"/> YES OR <input type="checkbox"/> NO |
| Does this waste contain regulated concentrations of 2,3,7,8-Tetrachlorodibenzodioxin (2,3,7,8-TCDD), or any other dioxin as defined in 40 CFR 261.31?  | <input checked="" type="checkbox"/> YES OR <input type="checkbox"/> NO |
| Is this a regulated Toxic Material as defined by Federal and/or State regulations?   | <input checked="" type="checkbox"/> YES OR <input type="checkbox"/> NO |
| Is this a regulated Radioactive Waste as defined by Federal and/or State regulations?  | <input checked="" type="checkbox"/> YES OR <input type="checkbox"/> NO |
| Is this a regulated Medical or Infectious Waste as defined by Federal and/or State regulations?  | <input checked="" type="checkbox"/> YES OR <input type="checkbox"/> NO |
| Is this waste generated at a Federal Superfund Clean Up Site?  | <input checked="" type="checkbox"/> YES OR <input type="checkbox"/> NO |

**V. Physical Characteristics of Waste****VI. Generator Certification**

I hereby certify that to the best of my knowledge and belief, the information contained herein is a true, complete and accurate description of the waste material being offered for disposal and all known or suspected hazards have been disclosed. All Analytical Results/Material Safety Data Sheets submitted are truthful and complete and are representative of the waste. I further certify that by utilizing this profile, neither myself nor any other employee of the company will deliver for disposal or attempt to deliver for disposal any waste which is classified as toxic waste, hazardous waste or infectious waste, or any other waste material this facility is prohibited from accepting by law. I shall immediately give written notice of any change or condition pertaining to the waste not provided herein. Our company hereby agrees to fully indemnify this disposal facility against any damages resulting from this certification being inaccurate or untrue. I further certify that the company has not altered the form or content of this profile sheet as provided by Waste Corporation. The undersigned individual warrants that he/she is authorized to sign this document on behalf of the Generator.

Michael L. White/Project Manager

Authorized Representative Name And Title (Printed)

Authorized Representative Signature

TAS Environmental

Company Name

3/18/13

Date

**VII. Waste Approval Decision** Approved RejectedExpiration: 7/1/2013

Conditions:

No free liquids. Approved for up to 200 cy total.  
Visually inspect each load.

Lauren R. Cohn, Reg. Eng.Laurie R. Cohn

Name, Title

3/19/13

Signature

Date



## **UNIFORM HAZARDOUS WASTE MANIFEST**

|  |  |   |              |                             |                             |                 |
|--|--|---|--------------|-----------------------------|-----------------------------|-----------------|
| <b>UNIFORM HAZARDOUS WASTE MANIFEST</b>  |  | 1. Generator ID Number  | 2. Page 1 of | 3. Emergency Response Phone | 4. Manifest Tracking Number |                 |
| 5. Generator's Name and Mailing Address  |  | Generator's Site Address (if different than mailing address)  |              |                             |                             |                 |
| Generator's Phone:   |  |   |              |                             |                             |                 |
| 6. Transporter 1 Company Name  |  | U.S. EPA ID Number  |              |                             |                             |                 |
| 7. Transporter 2 Company Name  |  | U.S. EPA ID Number  |              |                             |                             |                 |
| 8. Designated Facility Name and Site Address   |  | U.S. EPA ID Number  |              |                             |                             |                 |
| Facility's Phone:  |  |   |              |                             |                             |                 |
| 9a.<br>HM  | 9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any)) | 10. Containers  |              | 11. Total Quantity          | 12. Unit Wt./Vol.           | 13. Waste Codes |
|  |  | No.   | Type         |                             |                             |                 |
| 1.   |  |   |              |                             |                             |                 |
| 2.   |  |   |              |                             |                             |                 |
| 3.   |  |   |              |                             |                             |                 |
| 4.   |  |   |              |                             |                             |                 |
| 14. Special Handling Instructions and Additional Information   |  |   |              |                             |                             |                 |
| <p><b>15. GENERATOR'S/OFFEROR'S CERTIFICATION:</b> I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.</p> <p>I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.</p> |  |   |              |                             |                             |                 |
| Generator's/Offeror's Printed/Typed Name   |  | Signature   |              | Month                       | Day                         | Year            |
| 16. International Shipments <input type="checkbox"/> Import to U.S. <input type="checkbox"/> Export from U.S.  |  | Port of entry/exit: _____   |              |                             |                             |                 |
| Transporter signature (for exports only): <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>  |  | Date leaving U.S.: <input type="checkbox"/>   |              |                             |                             |                 |
| 17. Transporter Acknowledgment of Receipt of Materials   |  |   |              |                             |                             |                 |
| Transporter 1 Printed/Typed Name   |  | Signature   |              | Month                       | Day                         | Year            |
| Transporter 2 Printed/Typed Name   |  | Signature   |              | Month                       | Day                         | Year            |
| 18. Discrepancy  |  |   |              |                             |                             |                 |
| 18a. Discrepancy Indication Space <input type="checkbox"/> Quantity <input type="checkbox"/> Type  |  | <input type="checkbox"/> Residue <input type="checkbox"/> Partial Rejection <input type="checkbox"/> Full Rejection |              |                             |                             |                 |
| Manifest Reference Number: _____   |  |   |              |                             |                             |                 |
| 18b. Alternate Facility (or Generator)   |  | U.S. EPA ID Number  |              |                             |                             |                 |
| Facility's Phone:  |  |   |              |                             |                             |                 |
| 18c. Signature of Alternate Facility (or Generator)  |  | Month Day Year  |              |                             |                             |                 |
| 19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)  |  |   |              |                             |                             |                 |
| 1.   | 2.   | 3.  | 4.           |                             |                             |                 |
| 20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a   |  |   |              |                             |                             |                 |
| Printed/Typed Name   |  | Signature   |              | Month                       | Day                         | Year            |



## **WCA NON-HAZARDOUS WASTE MANIFEST**





ARKANSAS  
Department of Environmental Quality

## MEMORANDUM

**TO:** Enforcement Branch, Water Division  
Jason Bolenbaugh, Inspection Branch Manager, Water Division  
Kerri McCabe, Inspector Supervisor, Water Division

**FROM:** Chris Voss, Water Inspector, Inspection Branch

**cc:** Dean VanDerhoff, Emergency Response Coordinator  
Karla Schaeffer, Inspection Branch

**DATE:** March 28, 2013

**RE:** **Lion Oil Trading & Transportation (LOTT) - Crude Oil - ER#13-0169**

---

On March 25, 2013, I conducted a follow-up of the site of the March 9<sup>th</sup> pipeline release by LOTT (UPDATE #2). I found the clean-up of the affected area was proceeding well. Over 100 clean-up personnel were onsite. Much of the debris removal and bank washing was done. I met with TAS Operations Manager, Jason Wright, and LOTT Senior Regulatory Specialist, George Garten, to observe some areas which were being considered operationally clean. These areas had very little visible oil and seemed close to the pre-spill conditions. Several areas were nearing clean-up completion with oil leaching from the soil being the major concern.

| Water Division No Discharge Industrial Photographic Evidence Sheet |  |    |   |  |                 |         |              |      |
|--|--|----|---|--|-----------------|---------|--------------|------|
| <b>Location:</b>   | LOTT Oil Spill # 13-0169 on tributary of Little Cornie Bayou in Columbia Co.         |    |   |  |                 |         |              |      |
| <b>Photographer:</b>   | Chris Voss   |    |   |  | <b>Witness:</b> | None    |              |      |
| <b>Photo No.</b>   | 1  | Of | 4 |  | <b>Date:</b>    | 3/25/13 | <b>Time:</b> | 7:33 |
| <b>Description:</b>  | Zone 1 Area C of the spill after cleaning  |    |   |  |                 |         |              |      |
|  |   |    |   |  |                 |         |              |      |
| <b>Photographer:</b>   | Chris Voss   |    |   |  | <b>Witness:</b> | None    |              |      |
| <b>Photo No.</b>   | 2  | Of | 4 |  | <b>Date:</b>    | 3/25/13 | <b>Time:</b> | 7:33 |
| <b>Description:</b>  | Same as above  |    |   |  |                 |         |              |      |
|  |  |    |   |  |                 |         |              |      |

| Water Division No Discharge Industrial Photographic Evidence Sheet |  |    |   |  |                 |         |              |      |
|--|--|----|---|--|-----------------|---------|--------------|------|
| <b>Location:</b>   | LOTT Oil Spill # 13-0169 on tributary of Little Cornie Bayou in Columbia Co.         |    |   |  |                 |         |              |      |
| <b>Photographer:</b>   | Chris Voss   |    |   |  | <b>Witness:</b> | None    |              |      |
| <b>Photo No.</b>   | 3  | Of | 4 |  | <b>Date:</b>    | 3/25/13 | <b>Time:</b> | 7:39 |
| <b>Description:</b>  | Same as above  |    |   |  |                 |         |              |      |
|  |   |    |   |  |                 |         |              |      |
| <b>Photographer:</b>   | Chris Voss   |    |   |  | <b>Witness:</b> | None    |              |      |
| <b>Photo No.</b>   | 4  | Of | 4 |  | <b>Date:</b>    | 3/25/13 | <b>Time:</b> | 7:40 |
| <b>Description:</b>  | Same as above  |    |   |  |                 |         |              |      |
|  |  |    |   |  |                 |         |              |      |



ARKANSAS  
Department of Environmental Quality

## MEMORANDUM

**TO:** Enforcement Branch, Water Division  
Jason Bolenbaugh, Inspection Branch Manager, Water Division  
Kerri McCabe, Inspector Supervisor, Water Division

**FROM:** Chris Voss, Water Inspector, Inspection Branch

**cc:** Dean VanDerhoff, Emergency Response Coordinator  
Karla Schaeffer, Inspection Branch

**DATE:** March 28, 2013

**RE:** **Lion Oil Trading & Transportation (LOTT) - Crude Oil - ER#13-0169**

---

On March 28, 2013, I invested the clean-up efforts of the March 9<sup>th</sup> spill by LOTT near Magnolia AR (UPDATE #3). I found the bank washing and debris removal efforts to be nearing completion with over 100 personnel onsite. Approximately three miles of stream bank have been cleaned and monitored since the spill. I visited several sites with IC George Garten of LOTT to assess the clean-up efforts. LOTT is in the process of scaling down clean-up crews and are planning on being down to approximately 30 personnel on April 1<sup>st</sup>.

| Water Division No Discharge Industrial Photographic Evidence Sheet                   |   |  |    |  |                 |         |              |      |
|--|---|--|----|--|-----------------|---------|--------------|------|
| <b>Location:</b>   |   | LOTT Oil Spill # 13-0169 on tributary of Little Cornie Bayou in Columbia Co. |    |  |                 |         |              |      |
| <b>Photographer:</b>   |   | Chris Voss   |    |  | <b>Witness:</b> | None    |              |      |
| <b>Photo No.</b>   | 1 | <b>Of</b>  | 10 |  | <b>Date:</b>    | 3/28/13 | <b>Time:</b> | 7:59 |
| <b>Description:</b>  |   | Cleaned bank below beaver dams.  |    |  |                 |         |              |      |
|   |   |  |    |  |                 |         |              |      |
| <b>Photographer:</b>   |   | Chris Voss   |    |  | <b>Witness:</b> | None    |              |      |
| <b>Photo No.</b>   | 2 | <b>Of</b>  | 10 |  | <b>Date:</b>    | 3/28/13 | <b>Time:</b> | 7:59 |
| <b>Description:</b>  |   | Same as above  |    |  |                 |         |              |      |
|  |   |  |    |  |                 |         |              |      |

| Water Division No Discharge Industrial Photographic Evidence Sheet                   |   |  |    |  |                 |         |              |      |
|--|---|--|----|--|-----------------|---------|--------------|------|
| <b>Location:</b>   |   | LOTT Oil Spill # 13-0169 on tributary of Little Cornie Bayou in Columbia Co. |    |  |                 |         |              |      |
| <b>Photographer:</b>   |   | Chris Voss   |    |  | <b>Witness:</b> | None    |              |      |
| <b>Photo No.</b>   | 3 | <b>Of</b>  | 10 |  | <b>Date:</b>    | 3/28/13 | <b>Time:</b> | 8:00 |
| <b>Description:</b>  |   | Hard boom below beaver dams  |    |  |                 |         |              |      |
|   |   |  |    |  |                 |         |              |      |
| <b>Photographer:</b>   |   | Chris Voss   |    |  | <b>Witness:</b> | None    |              |      |
| <b>Photo No.</b>   | 4 | <b>Of</b>  | 10 |  | <b>Date:</b>    | 3/28/13 | <b>Time:</b> | 8:04 |
| <b>Description:</b>  |   | Beaver dam area  |    |  |                 |         |              |      |
|  |   |  |    |  |                 |         |              |      |

| Water Division No Discharge Industrial Photographic Evidence Sheet |  |           |    |  |                 |         |              |      |
|--|--|-----------|----|--|-----------------|---------|--------------|------|
| <b>Location:</b>   | LOTT Oil Spill # 13-0169 on tributary of Little Cornie Bayou in Columbia Co.         |           |    |  |                 |         |              |      |
| <b>Photographer:</b>   | Chris Voss   |           |    |  | <b>Witness:</b> | None    |              |      |
| <b>Photo No.</b>   | 5  | <b>Of</b> | 10 |  | <b>Date:</b>    | 3/28/13 | <b>Time:</b> | 8:16 |
| <b>Description:</b>  | Clean-up efforts below beaver dams   |           |    |  |                 |         |              |      |
|  |   |           |    |  |                 |         |              |      |
| <b>Photographer:</b>   | Chris Voss   |           |    |  | <b>Witness:</b> | None    |              |      |
| <b>Photo No.</b>   | 6  | <b>Of</b> | 10 |  | <b>Date:</b>    | 3/28/13 | <b>Time:</b> | 8:16 |
| <b>Description:</b>  | Same as above  |           |    |  |                 |         |              |      |
|  |  |           |    |  |                 |         |              |      |

| Water Division No Discharge Industrial Photographic Evidence Sheet |  |           |    |  |                 |         |              |      |
|--|--|-----------|----|--|-----------------|---------|--------------|------|
| <b>Location:</b>   | LOTT Oil Spill # 13-0169 on tributary of Little Cornie Bayou in Columbia Co.         |           |    |  |                 |         |              |      |
| <b>Photographer:</b>   | Chris Voss   |           |    |  | <b>Witness:</b> | None    |              |      |
| <b>Photo No.</b>   | 7  | <b>Of</b> | 10 |  | <b>Date:</b>    | 3/28/13 | <b>Time:</b> | 8:37 |
| <b>Description:</b>  | Cleaned site at weir 1   |           |    |  |                 |         |              |      |
|  |   |           |    |  |                 |         |              |      |
| <b>Photographer:</b>   | Chris Voss   |           |    |  | <b>Witness:</b> | None    |              |      |
| <b>Photo No.</b>   | 8  | <b>Of</b> | 10 |  | <b>Date:</b>    | 3/28/13 | <b>Time:</b> | 8:37 |
| <b>Description:</b>  | Same as above  |           |    |  |                 |         |              |      |
|  |  |           |    |  |                 |         |              |      |

| Water Division No Discharge Industrial Photographic Evidence Sheet |  |    |    |  |                 |         |              |      |
|--|--|----|----|--|-----------------|---------|--------------|------|
| <b>Location:</b>   | LOTT Oil Spill # 13-0169 on tributary of Little Cornie Bayou in Columbia Co.         |    |    |  |                 |         |              |      |
| <b>Photographer:</b>   | Chris Voss   |    |    |  | <b>Witness:</b> | None    |              |      |
| <b>Photo No.</b>   | 9  | Of | 10 |  | <b>Date:</b>    | 3/28/13 | <b>Time:</b> | 8:46 |
| <b>Description:</b>  | Cleaned area below weir 1 area   |    |    |  |                 |         |              |      |
|  |   |    |    |  |                 |         |              |      |
| <b>Photographer:</b>   | Chris Voss   |    |    |  | <b>Witness:</b> | None    |              |      |
| <b>Photo No.</b>   | 10   | Of | 10 |  | <b>Date:</b>    | 3/28/13 | <b>Time:</b> | 8:50 |
| <b>Description:</b>  | Same as above  |    |    |  |                 |         |              |      |
|  |  |    |    |  |                 |         |              |      |



ARKANSAS  
Department of Environmental Quality

## MEMORANDUM

**TO:** Enforcement Branch, Water Division  
Jason Bolenbaugh, Inspection Branch Manager, Water Division  
Kerri McCabe, Inspector Supervisor, Water Division

**FROM:** Chris Voss, Water Inspector, Inspection Branch

**cc:** Dean VanDerhoff, Emergency Response Coordinator  
Karla Schaeffer, Inspection Branch

**DATE:** April 2, 2013

**RE:** **Lion Oil Trading & Transportation (LOTT) - Crude Oil - ER#13-0169**

On April 1, 2013, I invested the clean-up efforts of the March 9<sup>th</sup> spill by LOTT near Magnolia, AR (UPDATE #4). I found the bank washing and debris removal efforts to be complete. LOTT is in the process of establishing a boom monitoring and maintenance program on and below the spill area. Approximately three miles of stream bank have been cleaned and monitored since the spill. I visited the weir area and the CR 34 area during this trip with IC George Garten of LOTT to assess the clean-up efforts.

| Water Division No Discharge Industrial Photographic Evidence Sheet |  |    |   |  |                 |        |              |      |
|--|--|----|---|--|-----------------|--------|--------------|------|
| <b>Location:</b>   | LOTT Oil Spill # 13-0169 on tributary of Little Cornie Bayou in Columbia Co.         |    |   |  |                 |        |              |      |
| <b>Photographer:</b>   | Chris Voss   |    |   |  | <b>Witness:</b> | None   |              |      |
| <b>Photo No.</b>   | 1  | Of | 4 |  | <b>Date:</b>    | 4/1/13 | <b>Time:</b> | 8:40 |
| <b>Description:</b>  | Upstream of the weir on Little Cornie Bayou  |    |   |  |                 |        |              |      |
|  |   |    |   |  |                 |        |              |      |
| <b>Photographer:</b>   | Chris Voss   |    |   |  | <b>Witness:</b> | None   |              |      |
| <b>Photo No.</b>   | 2  | Of | 4 |  | <b>Date:</b>    | 4/1/13 | <b>Time:</b> | 8:42 |
| <b>Description:</b>  | Downstream of the weir on Little Cornie Bayou  |    |   |  |                 |        |              |      |
|  |  |    |   |  |                 |        |              |      |

| Water Division No Discharge Industrial Photographic Evidence Sheet                   |  |    |   |  |                 |        |  |              |      |  |  |
|--|--|----|---|--|-----------------|--------|--|--------------|------|--|--|
| <b>Location:</b>   | LOTT Oil Spill # 13-0169 on tributary of Little Cornie Bayou in Columbia Co. |    |   |  |                 |        |  |              |      |  |  |
| <b>Photographer:</b>   | Chris Voss   |    |   |  | <b>Witness:</b> | None   |  |              |      |  |  |
| <b>Photo No.</b>   | 3  | Of | 4 |  | <b>Date:</b>    | 4/1/13 |  | <b>Time:</b> | 8:58 |  |  |
| <b>Description:</b>  | Hard boom on the CR 34 bridge crossing                                       |    |   |  |                 |        |  |              |      |  |  |
|   |  |    |   |  |                 |        |  |              |      |  |  |
| <b>Photographer:</b>   | Chris Voss   |    |   |  | <b>Witness:</b> | None   |  |              |      |  |  |
| <b>Photo No.</b>   | 4  | Of | 4 |  | <b>Date:</b>    | 4/1/13 |  | <b>Time:</b> | 8:58 |  |  |
| <b>Description:</b>  | Downstream of the CR 34 bridge   |    |   |  |                 |        |  |              |      |  |  |
|  |  |    |   |  |                 |        |  |              |      |  |  |



ARKANSAS  
Department of Environmental Quality

## MEMORANDUM

**TO:** Enforcement Branch, Water Division  
Kerri McCabe, Inspector Supervisor, Water Division

**FROM:** Chris Voss, Water Inspector, Inspection Branch

**cc:** Dean VanDerhoff, Emergency Response Coordinator  
Karla Schaeffer, Inspection Branch

**DATE:** April 5, 2013

**RE:** **Lion Oil Trading & Transportation (LOTT) - Crude Oil - ER#13-0169**

---

On April 5, 2013, I invested the clean-up efforts of the March 9<sup>th</sup> spill by LOTT near Magnolia AR (UPDATE #5). I found clean-up efforts were complete except for disposal of waste and some decontamination water. Oil booms were in place on Cornie Bayou and its tributary, which they are calling "No Name Creek." LOTT is operating on a draft plan for maintenance of those booms, which should be in place by the 8<sup>th</sup>. The contingency pond is full and needs to be brought down to a level where a release is not a concern before the next rain event.

U.S. ENVIRONMENTAL PROTECTION AGENCY  
POLLUTION/SITUATION REPORT  
Lion Oil Magnolia Spill (FPN E13610) - Removal Polrep



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
Region VI

Subject: POLREP #7  
Progress  
Lion Oil Magnolia Spill (FPN E13610)

Magnolia, AR  
Latitude: 33.2405560 Longitude: -93.1469440

To: Lawrence Stanton, EPA HQ  
R6 PolRep AR, Response and Prevention Branch  
Carl Edlund, Superfund Division  
Chris Petersen, EPA  
Sam Coleman, Region 6

From: Mark Hayes, Environmental Engineer, OSC  
Date: 3/26/2013  
Reporting Period: 3/18/2013-3/26/2013

## 1. Introduction

### 1.1 Background

|                     |                   |                         |                |
|---------------------|-------------------|-------------------------|----------------|
| Site Number:        | Contract Number:  |                         |                |
| D.O. Number:        | Action Memo Date: |                         |                |
| Response Authority: | OPA               | Response Type:          | Emergency      |
| Response Lead:      | PRP               | Incident Category:      | Removal Action |
| NPL Status:         | Non NPL           | Operable Unit:          |                |
| Mobilization Date:  | 3/9/2012          | Start Date:             | 3/9/2013       |
| Demob Date:         |                   | Completion Date:        |                |
| CERCLIS ID:         |                   | RCRIS ID:               |                |
| ERNS No.:           |                   | State Notification:     |                |
| FPN#:               | 13610             | Reimbursable Account #: |                |

#### 1.1.1 Incident Category

Oil Spill Response

#### 1.1.2 Site Description

On March 9, 2013, the Responsible Party, Lion Oil Trading, and Transportation, Inc. (LOTT) notified the National Response Center of an estimated 1500 barrel oil spill near Magnolia, Arkansas. On March 14, LOTT modified the spill volume to be 5060 bbls. The responsible party reported that the spill occurred from a failure in their suction pump, which transports crude oil from the tank battery to an underground 12 inch transmission line that is monitored with a supervisory control and data acquisition

(SCADA) system. The discharged oil filled a containment pond before flowing down gradient and impacting approximately 3 miles of Little Cornie Bayou. The initial estimate of 1 1/2 miles of creek did not account for natural topography of the area.

#### 1.1.2.1 Location

Magnolia, Arkansas

#### 1.1.2.2 Description of Threat

Estimated 5000 bbls of crude oil spill as follows:

- 1500 bbls of crude oil in Little Cornie Bayou
- 3500 bbls of crude oil at source location and in the containment pond

#### 1.1.3 Preliminary Removal Assessment/Removal Site Inspection Results

### 2. Current Activities

#### 2.1 Operations Section

##### 2.1.1 Narrative

##### 2.1.2 Response Actions to Date

On 9 March 2013 LOTT deployed 8 vac trucks to recover crude oil within Little Cornie Bayou. LOTT also constructed 2 weir dams on Little Cornie Bayou down gradient from the oil spill source location.

Additional hard boom was deployed between the weir dam locations. Collection points for the vac trucks were established at each of the weir dam locations. Vac trucks were also used to remove crude oil from the temporary containment pond. LOTT established 24 hour operations and continued to recover oil using vac trucks at various locations on Little Cornie Bayou throughout the night. Two fracking (frac) tanks were deployed onsite and utilized as temporary holding areas for crude oil and freshwater collection. A 25,000 barrel tank located on the facility property is being utilized to store recovered crude oil and freshwater.

On the morning of 10 March 2013, LOTT reported that 1,840 bbls of crude oil was recovered. LOTT response personnel and contractor, TAS Environmental, continued oil spill recovery operations with a crew of approximately 20 personnel and 8 vac trucks. Vac truck recovery operations continued throughout the day at the containment pond and weir dam 1, but were slowed by rainfall in the area causing resources and personnel to be redirected to improve access roads. A breach also occurred in weir dam 1 due to heavy rainfall, but all discharged crude oil remained contained by hard boom and Weir Dam 2.

On the morning of 11 March 2013, LOTT reported that 3,880 bbls of crude oil was recovered to date. LOTT continued to conduct 24 hour oil recovery operations. During night operations crews continued recovery operations at the containment pond and locations along Little Cornie Bayou. Recovery operations overnight was slowed due to reduced oil flow from cold temperatures. Throughout the day LOTT response personnel and contractor, TAS Environmental, continued oil spill recovery operations with a crew of approximately 27 personnel and 9 vac trucks. Recovery operations continued at the containment pond and various locations along Little Cornie Bayou.

On the morning of 12 March 2013, LOTT reported that 4,220 bbls of crude oil was recovered to date. LOTT continued to conduct 24 hour oil recovery operations, however, overnight activities were limited to monitoring of oil containment at weir dam locations 1 and 2 in Little Cornie Bayou due to freezing/below freezing temperatures. Additional resources and personnel were mobilized onsite throughout the day. Resources included 90 personnel, 11 vac trucks, and miscellaneous additional equipment to conduct oil spill response activities. Additional crews initiated cleanup and recovery operations along the creek just down gradient of the containment pond. Additional absorbent booms and pads were deployed at weir dams 1 and 2. LOTT installed wood matting to allow for better access to weir dam 2 for oil recovery. Recovery operations continued at various locations along Little Cornie Bayou throughout the day.

LOTT contractors conducted air monitoring in and around work zones for LEL and VOCs on 12 and 13 March 2013. LOTT contractors also conducted perimeter mobile air monitoring. On 12 March 2013, one detection of 5.2 parts per million (ppm) for VOCs was reported in the work zone area down gradient of the containment pond. On 13 March 2013, one detection of 4.0 ppm for VOCs was also reported in the same area. No other detections for VOCs or LEL were reported. EPA also conducted mobile air monitoring around the perimeter of the site in the vicinity of residential homes for VOCs, H<sub>2</sub>S, CO, O<sub>2</sub>, and LEL on 10 through 13 March 2013. No readings above background levels were detected.

On 13 March 2013, LOTT continued to conduct 24 hour oil recovery and cleanup operations. Oil recovery and cleanup operations continued at various locations along Little Cornie Bayou and areas down gradient of the containment pond throughout the day. Additional crews were also removing oil contaminated debris in Little Cornie Bayou up gradient of weir dam 1. Oil and water was pumped into frac tanks for separation at various locations throughout the site and will be transferred to the 25,000 gallon tank where the amount of oil recovered can be gauged. An updated amount of oil recovered to date will be provided on the next POLREP. LOTT completed the installation of wood matting near weir dam 2. Freshwater was discharged to the creek near the containment pond in an attempt to flush the oil downstream. Two turtles identified to be contaminated with oil were cleaned and relocated in a clean area of the creek. Resources during day operations included 90 personnel, 11 vac trucks, and miscellaneous equipment to conduct oil recovery and cleanup operations.

On 14 and 15 March 2013, LOTT continued to conduct 24 hour oil recovery operations along Cornie Bayou. On the morning of 15 March 2013, LOTT reported that 4,560 bbls of crude oil was recovered to date. LOTT conducted oil recovery and debris removal along various areas down gradient of the containment pond and Cornie Bayou throughout the day. Crews flushed areas in the creek immediately down gradient of the containment pond and in Cornie Bayou upstream of weir 1 and 2. Crews deployed additional boom in Cornie Bayou downstream of weir 2. LOTT also continued air monitoring throughout various work zones. The highest reading was reported to be 1.4 parts per million (ppm) for benzene in the immediate areas upstream of weir 2.

On 16 and 17 March 2013, LOTT continued to conduct 24 hour oil recovery operations along Cornie Bayou and the intermittent creek down gradient of the containment pond. Operations throughout both days consisted of oil recovery, debris removal, and flushing in areas along the creek down gradient of the containment pond and Cornie Bayou. Crews reinforced weir 1 and weir 2 by installing sand bags and additional soil. Crews also recovered oil near weir 2 and relocated installed hard boom upstream to create a buffer zone in case of a significant rainfall event. LOTT continued to excavate contaminated soil for disposal within and surrounding areas of the containment pond. LOTT reported that 104 personnel were working at the site to conduct debris removal and oil recovery operations.

On 17 March 2013, LOTT reported 4,475 bbls of crude oil was recovered to date. LOTT personnel informed EPA that the total number of oil recovered was reduced to reflect a more accurate volume amount.

On 18 through 26 March 2013 LOTT continued to conduct recovery operations along Cornie Bayou and the intermittent creek. LOTT crews continued working to meet their objective of removing all oil from the creek. LOTT reported that approximately 110 personnel were active at the site conducting oil recovery operations. Recovery operations consisted of crews flushing creek banks, utilizing skimmers with vac trucks, and debris recovery throughout the impacted areas along the intermittent creek and Cornie Bayou. The profile for waste generated onsite, including recovered debris, had been completed and approved by ADEQ for disposal. Crews also added absorbent boom approximately every 100 to 150 yards downstream of Weir 2 down to Co Rd 34.

On 22 March 2013 LOTT conducted a field test of an adsorbent material called Cell-U-Sorb under the oversight of EPA and ADEQ. Cell-U-Sorb was applied to a small amount of free oil along Bayou Cornie immediately upstream of weir 2 and was removed from the creek utilizing skimming nets. LOTT initiated a test application of Cell-U-Sorb to determine its effectiveness for potential use.

On 23 and 24 March 2013 a rainfall event caused a breach of weir 1, however, there was no observed impact to weir 2 or at deployed hard booms near Co Rd 34. LOTT removed the entire

construction of weir 1 on 25 March 2013.

On 24 March 2013 operations began to shift away from free oil recovery utilizing skimmers to predominantly conducting debris removal and flushing activities.

On 25 March 2013 LOTT reported that 4,598 barrels of crude oil was recovered to date.

#### 2.1.3 Enforcement Activities, Identity of Potentially Responsible Parties (PRPs)

#### 2.1.4 Progress Metrics

| <b>Waste Stream</b> | <b>Medium</b> | <b>Quantity</b> | <b>Manifest #</b> | <b>Treatment</b> | <b>Disposal</b> |
|---------------------|---------------|-----------------|-------------------|------------------|-----------------|
|                     |               |                 |                   |                  |                 |
|                     |               |                 |                   |                  |                 |
|                     |               |                 |                   |                  |                 |

### 2.2 Planning Section

#### 2.2.1 Anticipated Activities

##### 2.2.1.1 Planned Response Activities

- Continue recovery operations utilizing vac trucks, frac tanks, and skimmers at various locations throughout Little Cornie Bayou
  - Continue cleanup and debris removal operations in various areas in Little Cornie Bayou and the creek immediately down gradient of the containment pond
  - Continue flushing operations in Little Cornie Bayou and in areas down gradient of the containment pond
  - Deploy hard and absorbent boom as needed
  - Continued implementation of Incident Command System for organizational structure
  - ADEQ providing oversight with assistance from EPA as needed.
- ##### 2.2.1.2 Next Steps
- EPA demobilized on 27 March 2013 transitioning oversight activities to ADEQ with EPA assistance as necessary.
  - ADEQ will be onsite on 28 March to conduct a thorough assessment of the creek.
  - LOTT is working to complete the majority of the flushing and debris removal along the creek by 29 March 2013,
  - LOTT corresponding with ADEQ on a boom maintenance program that may begin as early as 1 April 2013 depending on ADEQ approval.

#### 2.2.2 Issues

-Significant rainfall event which slowed work activities on 23 and 24 March 2013.

## 2.3 Logistics Section

No information available at this time.

## 2.4 Finance Section

No information available at this time.

## 2.5 Other Command Staff

No information available at this time.

# 3. Participating Entities

## 3.1 Unified Command

LOTT is response lead with EPA and ADEQ providing oversight of operations

## 3.2 Cooperating Agencies

Arkansas Department of Environmental Quality (ADEQ)

Columbia County Office of Emergency Management (OEM)

U.S. Department of Transportation-Pipeline and Hazardous Materials Safety (PHMSA)

# 4. Personnel On Site

No information available at this time.

# 5. Definition of Terms

No information available at this time.

# 6. Additional sources of information

No information available at this time.

# 7. Situational Reference Materials

No information available at this time.

# ICS 209 (Oil Spill) - Incident Status Summary

Incident: Magnolia Station Event | Prepared By: Section, Planning at 3/27/2013 06:45

Period: Period 11 Working (3/27/2013 07:00 - 3/29/2013) | Version Name: 26 March 2013

## Spill Status (Estimated)

| Source Status:                           | Remaining potential:       |       |  |  |
|--|----------------------------|-------|--|--|
| <input checked="" type="radio"/> Secured | Rate of spillage:          |       |  |  |
| <input type="radio"/> Unsecured          | Amounts below measured in: |       |  |  |
|  | Last 24 Hours              | Total |  |  |
| Total Volume Spilled                     |                            | 5000  |  |  |

## Equipment Resources

| Type             | Ordered | Available /Staged | Assigned | Out-Of-Service |
|------------------|---------|-------------------|----------|----------------|
| Boom             |         |                   |          | 550            |
| ATV              |         |                   |          | 1              |
| UTV              |         |                   |          | 11             |
| Pickup Truck     |         |                   |          | 23             |
| Vacuum Truck     |         |                   |          | 4              |
| Skimmer          |         |                   | 2        | 1              |
| Boom             |         |                   |          | 550            |
| Trailer          |         |                   |          | 16             |
| Equipment: Heavy |         |                   |          | 14             |
| Pumps            |         | 3                 | 12       | 1              |
| Storage: Liquid  | 4       |                   |          | 6              |
| Roll Off Box     |         |                   |          | 6              |
| Generator        |         |                   |          | 3              |
| Pressure Washers |         |                   |          | 1              |
| Other Vehicles   |         |                   |          | 26             |

## Mass Balance (Estimated\*)

|                                      |   |
|--------------------------------------|---|
| Recovered Product                    | 0 |
| Evaporation                          |   |
| Natural Dispersion                   |   |
| Chemical Dispersion                  |   |
| Burned                               |   |
| Floating, Contained                  |   |
| Floating, Uncontained                |   |
| Onshore                              |   |
| Total spilled product accounted for: | 0 |

## Waste Management (Estimated)

| Type        | Recovered | Stored | Disposed |
|-------------|-----------|--------|----------|
| Oil         |           |        |          |
| Oily Liquid |           |        |          |
| Liquid      |           |        |          |
| Oily Solid  |           |        |          |
| Solid       |           |        |          |

## Shoreline Impacts

| Degree of Oiling | Affected | Cleaned | Remaining to be Cleaned |
|------------------|----------|---------|-------------------------|
| Very Light       |          |         |                         |
| Light            |          |         |                         |
| Medium           |          |         |                         |
| Heavy            |          |         |                         |
| Total            | 0        | 0       | 0                       |

## Personnel Resources

| Organization       | People in the Field | People in Cmd. Post | Total People On Scene |
|--------------------|---------------------|---------------------|-----------------------|
| Federal            | 2                   | 0                   | 2                     |
| State/Prov.        | 0                   | 0                   | 0                     |
| Local              | 0                   | 0                   | 0                     |
| RP                 | 16                  | 2                   | 18                    |
| Contract Personnel | 88                  | 4                   | 92                    |
| Volunteers         |                     |                     | 0                     |

Total Response Personnel:

112

## Wildlife Impacts

| Type    | Captured | Cleaned | Released | DOA | Died in Facility |       |
|---------|----------|---------|----------|-----|------------------|-------|
|         |          |         |          |     | Euth.            | Other |
| Bird    |          |         |          |     |                  |       |
| Mammal  |          |         | 1        |     |                  |       |
| Reptile | 0        | 2       | 2        |     |                  |       |
| Fish    |          |         |          |     |                  |       |
| Other   |          |         |          |     |                  |       |
| Total   | 0        | 2       | 2        | 1   | 0                | 0     |

## Safety Status

| Type             | Last 24 Hours | Total |
|------------------|---------------|-------|
| Responder Injury | 0             | 3     |
| Public Injury    | 0             | 0     |
| Other            | 0             | 0     |

\*Mass Balance estimates are based on common rules of thumb for natural and chemical dispersion, evaporation, skimming and burning efficiency.

**( ICS 209 (Oil Spill) - Incident Status Summary )**

|  |                                       |                           |
|--|---------------------------------------|---------------------------|
| <b>Incident:</b> Magnolia Station Event                        | <b>Prepared By:</b> Section, Planning | <b>at</b> 3/27/2013 06:45 |
| <b>Period:</b> Period 11 Working (3/27/2013 07:00 - 3/29/2013) | <b>Version Name:</b> 26 March 2013    |                           |

**( Special Notes )**

LOTT VIP visit conducted.  
Waste hauling began to WCA in El Dorado.

Current status:

Div 3:

Zone 3A: Washing, flushing and bagging continued through day.  
Estimated 90% complete. 27 March.

Zone 3B: Washing complete, boom maintenance will continue.

Zone 3C: Debris removal and washing continued. Estimated 95% complete, estimate boom maintenance only by 27 Mar.

Zone 3D: Boom maintenance only.

Div 2:

Zone 2A: Washing and debris collection continued through day.  
Estimated 85% complete.

Zone 2B: Sorbent boom placed, was crews were brought back in after rain event. Estimated 85% complete.

Div 1:

Zone 1A: 1200: Began using flush water from pond to flush to Beaver Dam. Crews are approximately 300 feet past Beaver Dam washing and debris collection continued through the day. Estimated 90% complete.

Zone 1B: Washing, flushing and debris bagging continued through the day. Skimming being conducted with the doodlebuggy. Estimated 85% complete.

Zone 1C: Boom maintenance will continue. Washing and debris collection complete.

\*Mass Balance estimates are based on common rules of thumb for natural and chemical dispersion, evaporation, skimming and burning efficiency.

## McCabe, Kerri

**From:** Voss, Chris  
**Sent:** Wednesday, April 03, 2013 12:52 PM  
**To:** McCabe, Kerri  
**Subject:** FW: LION\_REPORT  
**Attachments:** LION\_REPORT.doc

**Importance:** High

Chris

---

**From:** George Garten [mailto:[George.Garten@Lionoil.com](mailto:George.Garten@Lionoil.com)]  
**Sent:** Tuesday, April 02, 2013 10:56 AM  
**To:** Voss, Chris  
**Subject:** FW: LION\_REPORT  
**Importance:** High

Chris

Here are two samples from the containment water that we talked about yesterday. We put some of it in a clean frac tank that is why there are two samples. With rain in the forecast we would like approval to release the water. Let me know if you have any questions.

---

**From:** Lab\_Water  
**Sent:** Tuesday, April 02, 2013 10:49 AM  
**To:** George Garten  
**Subject:** LION\_REPORT



Lion Oil Company  
1000 McHenry St.  
El Dorado, AR 71730

04/02/13

### **CERTIFICATE OF ANALYSIS**

| Sample #               | AE07926       | AE07882      |
|------------------------|---------------|--------------|
| Sample Description     | MAAR0401WC008 | MAAR0329WC00 |
| Collection Date        | 04/01/13      | 03/29/13     |
| Collection Time        | 16:30         | 08:15        |
| Analyte                | Result        | Result       |
| OIL AND GREASE         | 2.1           | 6.2          |
| pH                     | 5.81          | 5.12         |
| Total Suspended Solids | 113           | 11.0         |
| TOTAL ORGANIC CARBON   | 26.27         | 23.26        |

If you have any questions regarding these analyses or procedures, please contact: Jeb Graham or Mike Allison at 410

**McCabe, Kerri**

**From:** Shafii, Mo  
**Sent:** Friday, April 05, 2013 11:42 AM  
**To:** George Garten  
**Cc:** McCabe, Kerri  
**Subject:** RE: Containment Water from Magnolia Station

Mr. Garten;

Sorry we don't have any authority under federal law to allow you discharge this water without a permit. You may take the water to a permitted facility.

Thanks

Mo

---

**From:** George Garten [mailto:[George.Garten@Lionoil.com](mailto:George.Garten@Lionoil.com)]  
**Sent:** Friday, April 05, 2013 11:33 AM  
**To:** Shafii, Mo  
**Subject:** Containment Water from Magnolia Station  
**Importance:** High

Mr. Shafii

I spoke with Chris Voss this morning here on site and he said that I needed to get with you regarding releasing the rainwater that has collected in the containment area behind our pumping station. I have attached an analysis for your review. Please let me know what steps would be necessary. Thanks again for your help.

George Garten  
870-814-4350



Lion Oil Company  
1000 McHenry St.  
El Dorado, AR 71730

04/02/13

### **CERTIFICATE OF ANALYSIS**

| Sample #               | AE07926       | AE07882      |
|------------------------|---------------|--------------|
| Sample Description     | MAAR0401WC008 | MAAR0329WC00 |
| Collection Date        | 04/01/13      | 03/29/13     |
| Collection Time        | 16:30         | 08:15        |
| Analyte                | Result        | Result       |
| OIL AND GREASE         | 2.1           | 6.2          |
| pH                     | 5.81          | 5.12         |
| Total Suspended Solids | 113           | 11.0         |
| TOTAL ORGANIC CARBON   | 26.27         | 23.26        |

If you have any questions regarding these analyses or procedures, please contact: Jeb Graham or Mike Allison at 410



Lion Oil Company  
1000 McHenry St.  
El Dorado, AR 71730

04/03/13

### **CERTIFICATE OF ANALYSIS**

| Sample #           | AE08276       | AE08275       |
|--------------------|---------------|---------------|
| Sample Description | MAAR0401WC008 | MAAR0329WC006 |
| Collection Date    | 04/01/13      | 03/29/13      |
| Collection Time    | 15:30         | 08:15         |
| Analyte            | Result        | Result        |
| SULFATE IN WATER   | 10.5 PPM      | 12.1 PPM      |

If you have any questions regarding these analyses or procedures, please contact: Mike @ 410



ARKANSAS  
Department of Environmental Quality

## MEMORANDUM

**TO:** Enforcement Branch, Water Division  
Jason Bolenbaugh, Inspection Branch Manager, Water Division  
Kerri McCabe, Inspector Supervisor, Water Division

**FROM:** Chris Voss, District 8 Oil & Gas Inspector, Water Division

**cc:** Dean VanDerhoff, Emergency Response Coordinator  
Karla Schaeffer, Water Division

**DATE:** April 12, 2013

**RE:** **Lion Oil Trading & Transportation (LOTT) - Crude Oil - ER#13-0169**

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On April 12, 2013, I investigated the clean-up efforts of the March 9<sup>th</sup> spill by LOTT near Magnolia, AR (UPDATE #6). LOTT now has a boom maintenance plan in effect to contain any oil left in the creek. I visited several boom locations with LOTT's George Garten to check on these sites, which are being maintained by Code 3 Services. I observed very little oil during this visit.

| Water Division No Discharge Industrial Photographic Evidence Sheet |  |    |   |  |                 |              |              |              |      |  |  |
|--|--|----|---|--|-----------------|--------------|--------------|--------------|------|--|--|
| <b>Location:</b>   | LOTT Oil Spill # 13-0169 on tributary of Little Cornie Bayou in Columbia Co.         |    |   |  |                 |              |              |              |      |  |  |
| <b>Photographer:</b>   | Chris Voss   |    |   |  | <b>Witness:</b> | None         |              |              |      |  |  |
| <b>Photo No.</b>   | 1  | Of | 4 |  |                 | <b>Date:</b> | 4/12/13      | <b>Time:</b> | 8:02 |  |  |
| <b>Description:</b>  | Booms on unnamed tributary of Little Cornie Bayou.                                   |    |   |  |                 |              |              |              |      |  |  |
|  |   |    |   |  |                 |              |              |              |      |  |  |
| <b>Photographer:</b>   | Chris Voss   |    |   |  | <b>Witness:</b> | None         |              |              |      |  |  |
| <b>Photo No.</b>   | 2  | Of | 4 |  | <b>Date:</b>    | 4/12/13      | <b>Time:</b> | 8:10         |      |  |  |
| <b>Description:</b>  | Boom on unnamed tributary of Little Cornie Bayou.                                    |    |   |  |                 |              |              |              |      |  |  |
|  |  |    |   |  |                 |              |              |              |      |  |  |

| Water Division No Discharge Industrial Photographic Evidence Sheet                   |   |  |   |  |                 |         |              |      |
|--|---|--|---|--|-----------------|---------|--------------|------|
| <b>Location:</b>   |   | LOTT Oil Spill # 13-0169 on tributary of Little Cornie Bayou in Columbia Co. |   |  |                 |         |              |      |
| <b>Photographer:</b>   |   | Chris Voss   |   |  | <b>Witness:</b> | None    |              |      |
| <b>Photo No.</b>   | 3 | Of   | 4 |  | <b>Date:</b>    | 4/12/13 | <b>Time:</b> | 8:21 |
| <b>Description:</b>  |   | Boom on Little Cornie Bayou  |   |  |                 |         |              |      |
|   |   |  |   |  |                 |         |              |      |
| <b>Photographer:</b>   |   | Chris Voss   |   |  | <b>Witness:</b> | None    |              |      |
| <b>Photo No.</b>   | 4 | Of   | 4 |  | <b>Date:</b>    | 4/12/13 | <b>Time:</b> | 8:39 |
| <b>Description:</b>  |   | CR 34 bridge crossing of Little Cornie Bayou                                 |   |  |                 |         |              |      |
|  |   |  |   |  |                 |         |              |      |